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C O N T E N T S

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GENERAL MANAGER

Charles R. Christianson

EDITOR

Doug Cotton

TECHNICAL EDITOR

Mark Fellows

ADVERTISING SALES

Charles A. Christianson

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Wayne Wrubel

GRAPHIC ARTS

Doug Cotton

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FROM THE EDITOR

I

f you missed my last editorial, I urged programmers to write programs that push our capabilities a little farther.

This time, I'd like to mention that there are some programmers out there doing exactly that. Folks like Rod Gasson, Maurice Randall, Nick Rossi, David Schmoll, Gene Barker, Brian Bell and others are providing some of the best software our computers have seen in a long time. This, then, is my opportunity to say thanks to those programmers for their efforts, and to urge you to support them.

How? It's not hard. Some of these programmers offer their software as shareware, and others as commercial products. If a program suits your needs, buy it, or send in the shareware fee. I'm not saying you should go out and buy software you'll never use; but don't put off spending a little money on software or shareware that you do find useful.

Many users today are finding out the hard way that specific programs eventually become difficult to find. The program you put off buying today may be gone next month, next year, or perhaps next week! There's just no telling.

Shareware? Okay, you've already got it, or you can easily download it from any of a number of sources. So what's to worry about? How about keeping the author interested in providing us with software? For every programmer we lose, we also lose an unknown number of future applications, updates, and someone whose advice can help others to create even more software. That's a lot at stake in exchange for the modest fees most shareware programmers request.

By the way, while you're out looking for some good programs, be sure to take a look at Loadstar. Fender Tucker and Jeff Jones never fail to amaze me with the sheer quantity of quality software they pack into every issue of Loadstar and the Loadstar 128 Quarterly. Softdisk, the company that publishes Loadstar, offers subscription options that will fit anyone's budget. They've even gone so far as to provide a 'pay-by-the-issue' plan to assure users they'll get every issue that they pay for! Again, your subscription does good things for the future of the C-64 and 128; it keeps Loadstar actively providing us with more software, which in turn keeps programmers in the market.

There are other ways that you can extend both the life and usefulness of your computer. But since that's what our feature story in this issue is about, I'll let you check there for the details.

Before I close, though, let me draw your attention to something you'll notice in this issue: we've dropped Advanced Techniques to make room for the extensive feature story. That may become a permanent situation since we're starting a machine language column. I'm

sure the Techniques column will be back from time to time, but it's the most likely candidate to be displaced when we need room. Other changes are in the works as well, but we'll chat more about those as the details firm up.

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SUITS YOUR
NEEDS, BUY
IT, OR SEND
IN THE
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FEE.



Doug Cotton
Editor



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BACKTALK

LETTERS AND QUESTIONS FROM OUR READERS

Of Mice, Printers and Inventory

I have three problems that I hope you can solve or at least point me in the right direction of a solution. I bought a C-64 second hand... I took a course in BASIC but found it to be of little use on the Commodore. I bought GEOS 2.0 and now I am able function enough to get by. My questions now are: 1. How to print in color (My color printer will only print in black)? 2. How to get my SmartMouse working (It will move the cursor vertically but not horizontally)? 3. Is it possible to get an inventory tracking program for GEOS?

- Jean

Your first question left us with a few questions of our own. Without know anything about your printer, we cannot give you a specific answer but a few general suggestions do apply. It is important that you realize that GEOS will only support color printing from within geoPaint, all other original GEOS applications are black only. Secondly, be sure that you have selected a color printer driver which supports your printer. If you have difficulty locating a driver on the original GEOS disks, many additional drivers are available in the PD and through CMD. Also, check to be sure you have a color ribbon in the printer. Many color printers use separate ribbons for color and black.

Your second question could have several different solutions. Be sure the mouse is attached properly and that the joystick port is actually functioning. Many times a bad port can cause this. A second possibility could be to reinstall the SmartMouse driver in GEOS as a corrupt file may cause a problem. Finally, it is possible that there is a problem with the mouse, this can be ruled out by trying it on another computer. If not contact CMD for assistance.

Your final question, although abbreviated for publication is a good one. I am not aware of any

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inventory control application for GEOS. However, it is entirely possible to use geoCalc (Spreadsheet) to keep track of your supplies (Both incoming and outgoing) and labor costs. From a spreadsheet, you could easily track your inventory and maintain an accurate accounting of your labor costs. Beyond this, I really cannot recommend a GEOS oriented solution.

For additional information about all three questions, please feel free to contact CMD's technical support staff at 413-525-0023 between the hours of 1 PM and 5:30 PM EST.

Top Tips Correction

Your tip #17 [Top Tips, Issue #6] about turning off the jiffy clock should have said POKE 788,52 to point the CINV vector to \$EA34, skipping the JSR at \$EA31—but how many readers will lock their machines up by sending interrupts to \$3531?

Also, tip #85 about omitting the "0:" from disk commands does these things:

1. Without drive designation, DOS automatically allocates a buffer for drive 1 that never gets deallocated, reducing the number of files that may be open at one time.
2. Without "0:" DOS will not accept 42, 44 or 63 as record lengths when opening a new RELATIVE file; and
3. Omitting "0:" from "@0:[filename]" enables the 'save-with-replace' bug.

[Also,] an article discussing the current spectrum of Commodore-oriented support in the U.S. could be interesting.

- Dave Shiloh

Thanks for pointing out the error in tip #17. You're indeed correct, and hopefully far fewer readers will have a problem now that you've brought it to our attention.

Regarding the suggestion to skip the drive designation, I tend to agree that it isn't one of the better things to do just to gain a little speed. We've cooked up a tip of our own for speeding up disk access which we think will gain programmers quite a bit more in speed. See the Top Tips column in this issue

for more on that. And for more on current support available to users, see our cover story in this issue.

More Info on Using Partitions

Enhancing upon Dr. Linfield's C128 Tricks, (Issue 6), it is also possible to access CMD device partitions direct. Merely predefine their assignments within the Pocket Writer 3 "CONFIGURE" file. As an example, drives can be defined as follows:

```
Assign0=0,8
Assign1=0,9
Assign2=RAM
Assign3=0,10
Assign4=0,11
Assign5=0,12
Assign6=0,16
Assign7=3,16
Assign8=4,16
Assign9=5,16
```

Therefore pressing 'Comkey + 8' displays a directory of RAMLink's partition 4 on drive 16. This will probably work with other programs as well. It works with Chris Smeets' CS/COS, for direct device calls, such as directories, etc. Part of a CS/DOS autoexec file might look like:

```
assign b 9,0
assign c 10,0
assign d 11,0
assign e 12,0
assign i 16,0
assign j 16,6
assign k 16,9
run "settimeday",u16
```

(The last line calls a Basic routine to set the CS/DOS time and date, using RAMLink's Real Time Clock. This short Basic program can be found on GENie and CompuServe). The time and date are also available for viewing while working within Pocket Writer 3, and other Digital Solution programs. Using Command Channel Access (Comkey + c) and entering a t-ra and following

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that, a second access of the Command Channel, with a <CR> will display the current date and time. I use this all the time as a clock to tell the time. A Pocket Writer 3 macro performs the few key entries.

In addition, a short Basic routine reads the Real Time Clock, so that today's date is automatically entered into all my Pocket Writer 3 letters, memos, and templates. More on this, at a later time, however.

And, of course, entering a 'cd//directoryname' (do not use the quotes) within the Command Channel of any program will change to the named subdirectory, within the partition.

All of these CMD enhancements are probably accessible with most commercial programs, in one form or another, and only depend upon the key stroke sequence of the program. They work with Dialogue 128 and Bob's Term Pro. Give them a try with your favorite software.

- Howard Herman

A Word on Word Tools

Good article in #6 about word processors. It gives a useful summary of what you can do with these programs.

By the way, Superscript 64 has better drive access than was shown in your overview. It will switch between Drives 8 and 9, as well as 0 and 1 on a dual drive. (See utility menu: Unit for Device Number, and Drive for Dual Drive numbers.)

Also, the manual is spiral bound (at least mine is). More: about the integration with Superbase: This is one-way (from Superbase to Superscript). The Write Stuff gives you two-way integration with Superbase so that you can make changes in a database export file in your word processor, then import the file back into a Superbase file.

My regular word processors are Superscript and The Write Stuff: Each has features (and faults) that the other doesn't.

Commodore World is a fine Magazine.

- Joost Vas Dias

Thank you for your kind words. We hope that Commodore World continues to meet your expectation. We appreciate your taking the time to write to use with your comments and are quite sure that many of our readers will find them helpful.

Die Harder

I have enjoyed my last six issues very much. It seems to be a top-notch publication, every bit as good as Compute's Gazette and RUN in their hey-day. Makes me wish that Commodore World had been around at the turn of the decade. May

your enterprise flourish for a long time to come!

I note that Diehard still advertises in C.W. The last issue of that magazine I received was in October '94. I had just renewed but heard no more from them. Written inquiries go unanswered so I can't help wondering if they have ceased publication and disappeared with my renewal money. If that is the case, some kind of consumer alert should be published.

Looking forward to the next issue of Commodore World.

- Donald A. Weaver

Thanks for the vote of confidence for Commodore World. Your comments about Diehard are all too familiar to us and quite honestly, we share in your concern. Please note that Diehard's ad does not appear in this issue. However, we did allow them to provide us with a statement regarding the delinquency of their publication.

As for a "consumer alert", we haven't gone that far yet. We take our obligation to our readers very seriously and have not permitted several companies to run ads with us for various reasons. In the case of Diehard, we have been in contact with their editor, Brian Croswaithe on several occasions, usually just prior to press. On each occasion, we were assured that the issue was being readied for the printer and would be going out shortly. Needless to say, this did not happen for whatever reason and their ad continued to run. I personally do not believe that they have gone south on their subscribers but do believe that they could have and should have done more to maintain a regular schedule. For more information on this subject refer to the statement which we have published in 'On the Horizon'.

European Invasion?

I really appreciate all of the information that you supply to us. With more and more Commodore suppliers going out of business, it's hard to find anything. I'm not holding my breath waiting for my next issue of dieHard!

I have been hearing rumors from several user groups here in California that a European company has been buying up all of the Commodore 64 & 128 parts and accessories that they can get their hands on. They have supposedly even been going to flea markets and buying any used stuff that they can get at a low price. This was reported to be happening all up and down the west coast.

Have you heard of anything like this going on across the country? What will we do if we can no longer get parts to repair or replace our old 64's and 128's? Is this company trying to put a choke hold on us to jack up prices or render the final

demise of the Commodore 64? Please pass on any information that you have about this activity to us, the frantic 64 users on the west coast.

- Jeff Colwell

I think we'll have to chalk this one up to rumor and speculation, Jeff. We haven't heard of this occurring, nor have we been contacted by any European companies with unusual requests for parts or supplies.

As for what to do to keep your 64 and/or 128 going into the future, see our cover story in this issue. It offers a wide range of options and provides a long list of sources to help you in your efforts to keep going.

A British Welcome

I am writing to you to thank you for allowing Electric Boys Entertainment Software UK (EBES to their friends) to import your Commodore World magazine. It is the best Commodore 64 magazine I have seen in a long time, and is far better than any magazine in the UK at the moment.

Commodore Format is the UK's only surviving Commodore magazine, it's 24 A4 pages, semi-colour, with a cover tape for £2.95 (about \$3.50 I think). It looks, feels and even reads like a 25p comic, and to be quite honest, I'd prefer to buy a comic of equal size, rather than that pathetic excuse of a magazine.

Your magazine, however, costs a mere £3.50, with 58 A5 pages. It is far superior in quality and is far more interesting to read. From issue 6 (the issue I'm waiting for), EBES will be putting their own cover disk with the magazine for a mere £3.95! That's one pound more for quality. What a bargain!

I wish you luck with any future plans, and hope you live long and prosper. Again, my writers and I enjoy your magazine very much. I will forward you a copy of issues 2, 3 and 4 of my own Sixty Four fanzine.

- L. S. Bebbington and S. Harris
Sixty Four Fanzine

We're as pleased as you that Russ Michaels at EBES has decided to distribute Commodore World in England, and applaud his decision to provide a reasonably priced cover disk.

We won't fault Commodore Format for their game coverage—certainly they seem to do that quite well. But we're sure there are some serious users in England looking for information on something besides the latest games. So, while Commodore World isn't as colorful [colourful? Nah!] as some rags—past and present—we feel the informational content is far more important.



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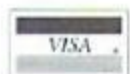
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IMPORTANT NOTICE

There have been substantial
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Phoenix Network is accessed.
Please call the following phone
number for complete details:

612-537-5077

ON THE HORIZON

News from dieHard.

We recently spoke with the owners of dieHard, and they faxed us the following statement for immediate release:

dieHard Lives!!!!

If it's not one thing, it's another! We were late with the Nov/Dec issue and the Oct Spinner hadn't gone out because of the schedule. We had 4 of our copy drives go out at once!

At our year-end planning meeting, we decided that there were just not enough hours in the day to keep us on top of our ten issue per year schedule. I have been working 100-hour weeks, with only one break in almost 3 years! Mia was having problems with our pregnancy and was forced to reduce her hours and her stress level, so I took on a lot of the administrative things along with my regular dieHard stuff. I am also the Managing Editor of The Sewing Room, a father, and was care giver for my wife.

As you can see, things were getting a little out of hand. Top this off with slowed marketing, rotations in staff, a tight budget, and no time...

Natasha Crosthwaite was born December 20—the Nov/Dec issue was still at the printers. By the time I got back to work, we were late for our new bi-monthly schedule. The Nov/Dec issue went from being the Holiday issue to becoming the Holiday/Winter issue.

To make an already-too-long story short, this is our new schedule:

Holiday/Winter 94/95 - Out around mid-April
Spring 95 - mid-May
Summer 95 - July
Dog Daze 95 - September
Autumn 95 - November
Holiday 95 - January
Winter 96 - March

Subscription rates are as follows:

One Year (6 issues) - \$16.97
One Year (6 issues) With the Spinner companion disk - \$55.97
Two Years (12 issues) - \$29.97
Two Years (12 issues) with the Spinner companion disk - \$99.97

Those readers who had subscriptions in 94 that were for 10 issues will have their expiration dates corrected to cover those missing issues. However, since there will not be (hopefully) any missing in 95, all new and renewal subscriptions will be for 6 issues. This keeps the Flyer's size up and price down.

Disk prices, too, have gone up. Single Spinners are \$7.95 and back issues are up also. We have managed to at least hold our current costs by contracting the copy work out of house. Also, the quality of the disks should be more consistent.

The October Spinner was mailed in early March. I want to thank everyone for their patience over the past few months. I'd also like to thank our writers. We've had to pipeline payments out through the tight budget. The mess in our filing system is still being worked out. Jon and I are on the case.

*dieHard, 816 West Bannock Street, Suite 502, Boise, Idaho, 83701-5850.
(208) 383-0300, Fax (208) 383-0151.*

Commodore Liquidation Update: Movement At Last?

On February 9th, lawyers representing former Commodore executives Irving Gould and Medhi Ali were to file papers with the Bahamian Supreme Court challenging a settlement that the liquidators had reached with Commodore's creditors to have at least part of the case held before the U.S. Bankruptcy Court. It is assumed that the reason for the settlement was to allow U.S. courts to look into alleged misconduct by Commodore Management for the twelve month period preceding the announcement of voluntary liquidation by Commodore. Bahamian law allows for such investigations to go back only three months. This settlement would have cleared the way for the sale of the company to the highest bidder, since any other legal and financial remedies beyond the sale of Commodore's immediate assets would be handled separately.

Is there good reason for the creditors to request such an agreement? Possibly. On February 10, Philadelphia Inquirer staff writer Dan Stets reported that Commodore's directors paid \$2.6 million to extend their liability insurance for three years—less than a week before beginning the liquidation of the company last May. The chief beneficiaries named in this policy are Irving Gould and Mehdi R. Ali, whose personal assets are protected from negative legal judgments by the policy. Since the policy premium came out of company assets, it is money denied Commodore creditors and stockholders. This also shows that Commodore Management was making moves to protect themselves, an action which would lead one to wonder what actions they may have taken to need such protection.

The Bahamian Supreme Court failed to convene that day, however, due to an emergency leave requested by one of the judges. The court was set to reconvene about two weeks later to rule on the Gould/Ali objections. As yet, Commodore World has been unable to ascertain whether the agreement was upheld or revoked, but indications are that it was upheld. Further legal investigations and judgements concerning this matter will be conducted separately from the sale of Commodore's assets.

Despite the postponement, two parties other than Commodore UK and CEI showed up that day to enter the bidding: Escom, AG., reputed to be the second-largest computer company in Germany; and one Louis Ulysses of Seattle, who stated he was there to represent an un-named major technology company. Many have speculated that Mr. Ulysses may be representing Microsoft, who is rumored to be interested in the rights to certain parts of the Amiga's graphical interface.

Escom is no newcomer to these proceedings; rather they're returning after apparently losing interest. Last September, Escom was reportedly willing to pay \$12 million for Commodore. In a surprising move, liquidators of Commodore's German subsidiary sold Escom the rights to the Commodore trade name and logo in Germany for \$1.4 million on February 16, despite learning one day prior that a temporary restraining order against such a sale was being issued by the U.S. Bankruptcy Court in New York. Liquidators of the parent company, Commodore Electronics, LTD., learned of the sale March 1, while meeting with Escom representatives about the sale of all of Commodore's assets.

Trustee Bernard Hembach of Frankfurt, who sold the Commodore logo to Escom, defended the sale claiming that the U.S. Bankruptcy Court had no jurisdiction over the matter, and that the trade name and logo belonged to the German subsidiary. Franklin Wilson, one of two Bahamian liquidators responsible for selling the assets of Commodore's parent company, maintained that all trademarks are the property of the parent company, and feared that the German sale might make it impossible to sell the company's technology to another buyer. These fears were apparently well-founded, as the Commodore UK group threatened to pull out of the bidding if the trademarks could not be guaranteed.

Almost immediately thereafter, what appears to be a compromise with Escom was reached: The liquidators announced that Escom's bid had been selected as the basis for the final auction of Commodore's assets, and Escom promised to turn over the German trade name rights to the winner of a final bidding auction to be held at a later date.

Escom's offer includes \$3.5 million for Commodore's core assets, an additional \$1 million for its German assets, \$500,000 for the Dutch assets and \$1 million for manufacturing inventory located in the Philippines. Escom has agreed to pay \$4.5 million to the Bahamian liquidators unconditionally, but will pay the remaining \$1.5 million only if the liquidators can deliver the Dutch and Philippine assets.

The final bidding auction is the last stage of the bidding process for Commodore's assets. Having now selected a bid with terms that are agreeable, the liquidators will give all other bidding parties a chance to outbid Escom in a one-day final bidding round. The winner of the auction would have to agree to pay Escom for the rights to the Commodore trade name in Germany. This auction is supposed to take place April 20th, to be held at the offices of Fulbright & Jaworski, L.L.P., 666 Fifth Avenue, 31st Floor, New York, New York 10103.

It's common speculation that Escom's bid is very low, and was picked only because the terms of the bid were more agreeable to the liquidators than those of the other bidding parties. Escom is reportedly only interested in using the Commodore trade name and logo for products it sells through its European distribution chain. This means that chances are good that either Commodore UK or CEI will end up with Commodore's assets. Both of these parties have expressed plans to put Commodore's Amiga product line back into production within a few months of obtaining the assets.

Phoenix Net Changes

As of March 1, 1995, the Phoenix Network can be accessed only by direct dialing. Due to financial considerations, the SprintNet lines and the 800 support number were discontinued.

Manager Glen Doty stated that charges are currently set for credit card billing of \$20.00 a month for unlimited usage for that month. If you don't sign on during a specific month, you will not be charged for that month; however, this may change depending on input from Phoenix Network's users. All Internet features and addresses remain fully operational.

In a message to users, Doty said, "We've come to know and love almost everyone that has signed on and stayed with us. We consider you as a part of our family. Hopefully some of you will stay with us during this time of trouble. Our Internet service will still continue so that you can still use us as a post office or at least drop us the occasional line. Our Trade Wars game will continue for those of you who started empires. Our libraries will still be maintained so you can still upload or download."

The new phone numbers are:

Voice: 1-612-537-5077
Modem: 1-612-537-5147 (9600 bps)
1-612-537-0199 (2400 bps).

Loadstar News: The Compleat Programmer, The Loadstar BBS, and Pay-by-the-Issue Plan

In an obvious attempt to further inundate the market with products containing the obscure spelling of the word 'complete', Loadstar is set to release *The Compleat Programmer*, an extensive collection of programming utilities and tools. Loadstarite Jeff (Compleat) Jones tells us that the collection will include editors for sprites, fonts, and text; assemblers; basic extensions; machine language tutorials, and more. Price was expected to be around \$20.00, though the release date is being withheld until the product is completely ready for shipment.

Loadstar... The BBS adds support to Loadstar the disk magazine. Software and magazine specials are announced on the BBS's news system, which is run using Image v1.2 BBS software. The BBS offers local messages on a variety of topics and is networked mail with other U.B.A.N. (United BBS Alliance Network) systems. Loadstar disk samplers and other files are available in the download areas. The phone number is: 1-318-425-4382, 300-2400 baud. Commodore Color Graphics, ANSI, ASCII may be used.

Loadstar recently announced new pricing plans, including an option aimed at those wary of the disappearing magazine syndrome. This latter plan allows subscribers to pay for each issue as it is shipped. Contact Loadstar for more details.

CMD News: HD-20 Sells Out, HD-40 Price Reduced, New Games Released

CMD recently announced that supplies of their HD-20 have been depleted. The HD-20, long-ago discontinued due to a lack of 20 MB SCSI drive mechanisms in the distribution channel, had been put back into production temporarily when CMD was able to purchase a limited quantity of new 20 MB drives originally manufactured for Apple's Macintosh laptop computers. Re-released at an all-time low price of \$299.00, the drives sold quickly, depleting CMD's stock in just a few weeks.

In a move to maintain a reasonable low-end offering in their hard drive line, CMD has now announced a limited-time price reduction on their HD-40 hard drives, with the price dropping from \$375.00 down to \$329.00. Again, these prices have been based on a special purchase of drive mechanisms, so CMD warns that quantities are limited at this price.

Two new games, both imported from Electric Boys Entertainment Software in England, are now available for shipment from CMD. The new titles are *Heavenbound*, reported on in the last issue of *Commodore World*; and *Lions of the Universe*, a space-based shoot-em-up. CMD has announced that they will retail these titles at \$19.95 each.

In other news from CMD, production of *SmartMouse* and *SmartTrack* has been temporarily halted due to supply problems with the custom

Commodore mouse chip. CMD is having more of these chips produced, so both products should be readily available again in the second quarter of this year.

Modems for geoFAX

As of this writing, Maurice Randall is still working on getting his geoFAX software, initially due for release in late January. Maurice apparently ran into some unforeseen problems, but appears to be making solid headway on the program. Hopefully it won't be delayed much longer, and we expect it should certainly make it to market before Microsoft's Windows '95 does. The announcement of that upcoming geoFAX software a few weeks ago sent users scurrying for Group 3, Class 2 compatible faxmodems. We picked up on the following list of these modems compiled by Raymond Day. Models marked with an asterisk (*) are those which did not suffer problems when tested for impaired line transmission, a sign of better noise immunity and transmission reliability. Also, while it didn't appear in this list, the Boca 28.8K External BocaModem is also Class 2 compatible.

Manufacturer	Model
Best Data Products	Smart One 1442FX
Boca Research	*M144EW External BocaModem
Cambridge Telecom	Datasystem 1414XE
Cambridge Telecom	Discovery 9632AX
Cambridge Telecom	14400V32bis
CMS Enhancements	X14400 EXT. Fax
CXR Telcom	Action Fax 1445-FXD
GVC Technologies, Inc.	FM144/144V
Multi-Tech Systems	MT1432BA
Multi-Tech Systems	*MT932BA
Penril DataCom Networks	*DX144
Practical Peripherals	PM14400FXMT
Practical Peripherals	PM14400FXSA
Practical Peripherals	PM9600FXMT
Supra Corp.	*Supra Fax Modem V.32 9.6
Supra Corp.	Supra Fax Modem V.32 14.4
Telebit Corp.	T3000
The Complete PC	*Turbo Modem Plus
Twincom	14.4/DF
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Western Datacom	WorldCom V.32bis
Zoom Telephonics	*VFXV32
Zoom Telephonics	VFXV32bis

The Golden Spectro Programming Challenge

GENIE and the Motorcycling RoundTable are the official online service of Spectro Oils of America, a division of Intercontinental Lubricants Corp. Spectro Oil is America's #1 high performance motorcycle lubricant. Spectro also manufactures a complete line of lubricants for snowmobiles, ATV's and other recreational vehicles. Spectro supports a worldwide distribution network from their U.S. headquarters, located in Brookfield, CT.

One of the most frequently asked questions of Spectro is "what is the ratio of fuel to oil that I should use in my two-stroke motor?"

Answer that question by designing a program that will calculate oil mixture ratios by solving for the unknown variable and you can win one of these great prizes!

Grand Prize: Spectro Pro Racing Jacket (\$100 retail value), a case of Spectro oil of the winner's choice (\$100 retail value) and \$100 in GENIE online time.

Best in Class Winners: Spectro 1994 US Superbike Championship T-shirt, ball cap and a 4-pack of Spectro oil of the winner's choice (\$50 retail value) and \$50 in GENIE online time.

Entry classifications are: Amiga, Apple, Commodore, DOS/IBM-Compatible, Macintosh, OS/2, Windows, Other.

Contest entries must be received no later than May 15, 1995. Complete details and rules of this contest can be found in the Commodore RoundTable Bulletin Board on GENIE. For information about signing on to GENIE, see CW Issue 4, or contact GENIE Client Services at 1-800-638-9636.

Lottoman Has Your Number

There's a new sophisticated database and analyzer system available to help lotto players with choosing numbers by using a logical and realistic approach.

LOTTOMAN V2.0 aids the lotto player in tracking the history and trends of the lotto game by providing valuable information through reports and graphs and statistical analysis. A color rating system gives a good visual representation of each number making it easier to detect patterns.

LOTTOMAN II provides further analysis and an advanced wheeling system which generates all possible number combinations from parameters defined by the lotto player.

Each program is \$19.95, plus \$3.00 s/h. To order or request further information, write to LOTTOMAN, P.O. Box 44, New Millport, PA 16861.

New Dialogue 128 Extension Programs

Henry Sopko has created three new extension programs for Dialogue 128. The first, "BLANK-IT.SL.EXT" is a screen blanker, similar to the his original "BLANK-IT.EXT", but with changes for SwiftLink users to handle the VDC screen better at higher baud rates. "SLIDER.EXT" is a "put the numbers in order" game which can be played while transferring files or while waiting to get online a BBS during autodialing. The display can be made inactive and recalled without losing the current game from memory. "SLIDER.SL.EXT" is the same game, but for those who use the SwiftLink version of Dialogue 128.

Desmond Takes it Back

Desterm 128 users have been waiting for RTS/CTS flow control to use high speed modems to their maximum potential, waiting for the "new" programmer, Steve Cuthbert to add this and make other changes to the term program. When this didn't happen, Matthew Desmond took back his program and has said he will begin working on making the needed changes.

Shareware Aid for QWKRR Users

Announcing a new Commodore 128 - 80 column program for all C-128 QWKRR users. Now available, "The Interfacel" by Lee Cooper is a utility program to interface QWKRR for fully automated transitions between QWK message packets.

Features:

- Auto-execution of first entry option! Run scripts from EZ-LOADER then Interfacel and your mail will be waiting for you! (Registered Versions)

- 10 definable BBS packet names with full CMD drive and path support
- Each packet selectable from "The Menu"
- One copy of this program placed in any partition and/or drive, and you are set—it is not location dependent!
- Define default Tagline file, Intro/Salutations, Macro File, Import/Export filename and character set for each packet
- Automatic setting of QWKRR drive defaults for each packet—no more looking at QWKRR's drive selection screen
- Supports multiple QWKRR file names for alias use in same partition or on same disk! Eliminates the need for multiple QWKRR support files!
- Comes with "The Xtractor!", which eliminates the need for multiple copies of QPE or QPX!
- Xtractor! auto-senses PKZIP 2.04g compression format! (Sorry still unable to dissolve these files at this time, but the program is ready to accept it!)
- RAMLink, HD, and CBM drives supported (sorry, no 1581 partitions)
- There are 2 ways to use Interface!: with or without the Xtractor!
- With the Xtractor!, you simply select with one key stroke the packet you want dissolved, and you don't touch the computer again until QWKRR is ready for you to read!
- Allows you to go back and finish reading an already dissolved packet!
- Allows you to automatically index a packet that has been dissolved on another platform, and defaults for QWKRR are set for you in the process for each individual packet!
- Comes complete with QWKRR v4.33 patch! This program was developed with cooperation from Rod Gasson for maximum compatibility with QWKRR!

The program is shareware, \$10.00 (US). Unregistered versions are slower than registered versions and the auto-exec feature is disabled. All other features are enabled. If your local BBS doesn't have the program, download "1interf.sfx" and "2interf.sfx" from 221B Baker St. BBS, (904) 862-8643.

C*Base 64 BBS Software Under New Ownership

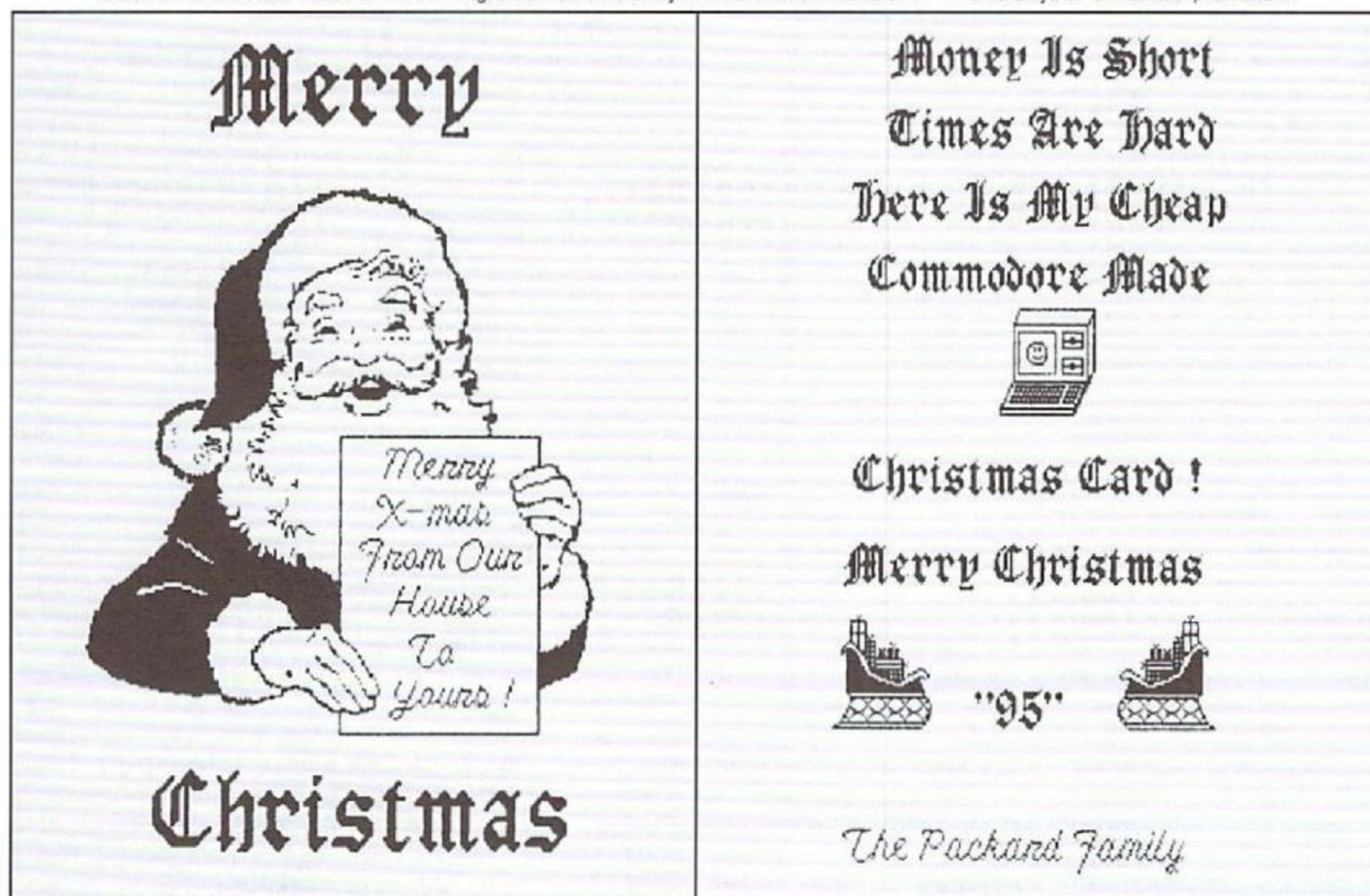
Jerome P. Yoner has become the new owner of C*Base 64 BBS. Currently, he is updating the BBS's network module to reduce long distance costs for C*Base Sysops. Yoner has stated that a re-registration fee will not be required for those who have PURCHASED C*Base v3.x, and will give full support for the BBS. The BBS package includes the BBS, Tech Guide, Network module, a special compiler, and On-Line Games for \$65.00 US. Jerome P. Yoner, #4-361 Maryland Ave., Brandon MB R7A 6R6, Canada.

Amigaworld Ceases Publication

Following in the footsteps of its sister publication, RUN, IDG's Amigaworld magazine for Amiga users has ceased publication. The decision to make the April 1995 issue their last apparently came as a surprise not only to users, but to the employees as well. Clearly, the decision was based on declining subscriptions, loss of advertisers, and the overall grim outlook that has taken hold in the Amiga market since Commodore went into liquidation nearly a year ago. IDG, a large publisher of periodicals both in and out of the computer field, is expected to substitute other Amiga-related publications or refunds to complete their obligations to subscribers.



Below: The front and inside of the winning Christmas card entry in GENie's Commodore RT 'Twelve Days of Christmas' promotion.



THE CONNECTION

NEWS FROM COMMODORE-RELATED VENDORS AND PUBLISHERS



FEAR

You type a fifteen-page report, then forget to save it. You quit the program. It asks "Are you sure? Y/N." You tell it yes. You lose your work because you've already exited the program. Whose fault is it? Yours or the computer's? A lot of IBM users talk about "wiping out" their hard drives accidentally, and blame it on Windows. Well I've used Windows, and I can't believe that it would let anyone do that without user verification — possible double verification.

What is it about computers that scares people so much? The other day I was at a pharmacy, filling my wife's prescription. I had ten minutes to do it because I had to pick up my daughter from school, which was right next door to the pharmacy. Well my daughter ended up waiting for me in the office while the pharmacist cursed his computers — and I cursed his fear of them.

My wife has an insurance card with a zillion-digit number on it. With this card, we never pay more than nine dollars for any prescription. This would be great if not for the pharmacist's fear of computers. He couldn't find my wife's name online, and kept asking me if my wife was the card holder because certainly it couldn't have been HIS mistake.

I watched him cautiously type in every letter, every number, his hands literally shaking, as if any wrong keystroke move would cause disaster. He came back to me three times, "Is your wife the card holder? Is this insurance cancelled?"

"Yes!" I told him. I wanted to add, "Maybe you should start again by re-keying that zillion-digit number."

"These durned computers!" he complained, "I wish we didn't have to have them, but they make us verify the insurance."

I watched the pharmacists confer over this monumental problem while my watch ticked on past 3:00. Never had it entered their minds that perhaps they keyed in the wrong number. By 3:09, I knew my daughter was walking back inside the school to call home. Just when I was about to offer to pay the full \$50.00 for the medicine, the female pharmacist suggested that he hit F5 all the way back and key it over."

Beep! "Oh! There is Rhonda Jones' account! These finicky computers! Sometimes you gotta key in these things twice."

I nodded and scribbled out my \$9.00 check.

Whenever I hear the words "computer error" on the news, I wonder if it was truly the computer that made the error. Like that businessman who was arrested when he refused to return \$900,000 when a 1994 "computer error" had

\$1,000,000 transferred into his account instead of \$100,000. The way I see it, a clerk typed one too many zeroes. That's a typo, not "computer error." Sure, the businessman was a jerk, but the computer wasn't.

Then there was that radiation therapy device that administered too much radiation and killed people when the operator "typed too fast." I think that the reporter I heard on the news should have said that the device obeys commands explicitly, and if the operator makes a typo, he could expose the patient to many times the radiation intended. If this device had knobs and dials instead of a keyboard, the story wouldn't have been about the machine, but the faulty operator.

I'm glad that computers can't think, and can't take over the world. If they could think they might be offended that we humans make mistakes and then blame them. We advertise items on store shelves as being on sale, then forget to re-program the price into the computer. When a customer sees the price come up higher than advertised, we pass the blame on to the computer, manually punch in the correct price, and become the heroes. Let's face it. Computers do what we tell them, and little else. When they begin doing other than what we tell them, they're usually crashing, and soon do nothing. When a computer crashes, it usually doesn't replace one hundred thousand with one

million. It replaces one hundred thousand with "sg^&&#%)(^)9" and usually it's another computer that catches the mistake instantly. We are the worst kinds of taskmasters when we blame a functioning computer for our own mistakes.

- Jeff Jones

Associate Editor, LoadStar

the Underground

LOOKING UNDER

What's this? A new column for your perusal, that's what! Yep, the folks at Commodore World have given us our own space to spout off—be afraid, be very afraid!

For those uninformed readers out there, the Underground is a small format Commodore magazine created using 8-bit equipment and geoPublish. We do our best to bring you new and interesting angles on how to exploit your computers to their fullest. The size of our readership may not compare to the magazine you now hold, but we enjoy a loyal following, and word is spreading...

We have articles on GEOS, telecommunicating, programming, reviews, hardware projects, commentary and other interesting stuff. For subscribing information, see our wee ad in the Commodore World classifieds.

THE CONNECTION

One feature people really like is the compilation of all PD, Shareware, and BASIC listings mentioned in each issue. Just send us a disk in a mailer with return postage, and we copy the programs for the issue(s) that you request. This we call Underware!, and is available to subscribers only, of course.

The Underground is produced on the latest and best stuff for our Commodores. Articles are usually imported or created in The Write Stuff 128, and converted to geoWrite format with Wrong Is Write. These are then poured into geoPublish templates for layout. All this resides on a 4

MB RAMLink plugged into a C128 with 64K video RAM. The output then travels through a geoCable into a TI microWriter PS23 laser printer for output. Just recently, we've added a Super Snapshot v5 for screen shots, and a HandyScanner to add more eye-pleasing elements to our pages.

I really like using my Commodore. It's a great tool. We can do just about everything anyone else can do on any other platform, plus stuff they can't. Okay, so we can't design a Boeing 777, or figure pi to the 400th place in one second, but who cares? I can access the Internet, use a Postscript laser printer, store

programs in Non-Volatile RAM, and layout a magazine!

It's funny, but people at work have been coming to me lately with their computer questions. Me, the Commodore guy. It's kind of empowering.

Let it be known that I have nothing against other platforms. I think computers in any form are great. I am just as enamored with computers now as I was when names such as Timex/Sinclair, Atari, TI-99/4, and VIC-20 were the big buzzwords. Different computers are always different, of course, each displaying strengths and weaknesses. It's no mystery that I'm partial to Commodore 8-bits.

One thing I like best about our humble computers, is the ability to use various hardware not meant for it. Most modems, printers, and even SCSI hard drive mechanisms can be used by a Commodore. This increases the usefulness of a wonderful machine, as well as cause delightful bewilderment from other computer owners.

Anyway, I am grateful to Doug for giving this space to the Underground, and I hope that its contents won't ever make him regret it. Until next time, see you outside of the mainstream!

- Scott Eggleston
Editor, the Underground



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TOP TIPS

EVERYBODY CAN ALWAYS USE A FEW MORE TIPS

GET a Little Quicker

Using the GET# function in BASIC to get individual bytes from a disk file can be very slow. We all know that using INPUT# is a lot faster, but there are many cases where it simply cannot be used. We can, however, fool the 64 into making an open file the default, and thus use GET instead of GET#. This speeds up getting the bytes since BASIC no longer has to switch the default input between the keyboard and your disk file. Here's how it's done:

- Open the file you want to read from
- Poke the filename into location 781
- Perform a SYS to 65478 (CHKIN)
- Use GET to read in the bytes you want to read

After you're done reading from the file:

- Perform a SYS to 65484 (CLRCHN)
- Close the file

Here's an example of reading the error channel using this method:

```

10 OPEN15,8,15
20 POKE781,15
30 SYS65478
40 GETBS
50 PRINTBS;
60 IFST<>64THEN40
70 SYS65484
80 CLOSE15

```

To adapt the above routine to the 128, delete line 20, and change line 30 to read:

```

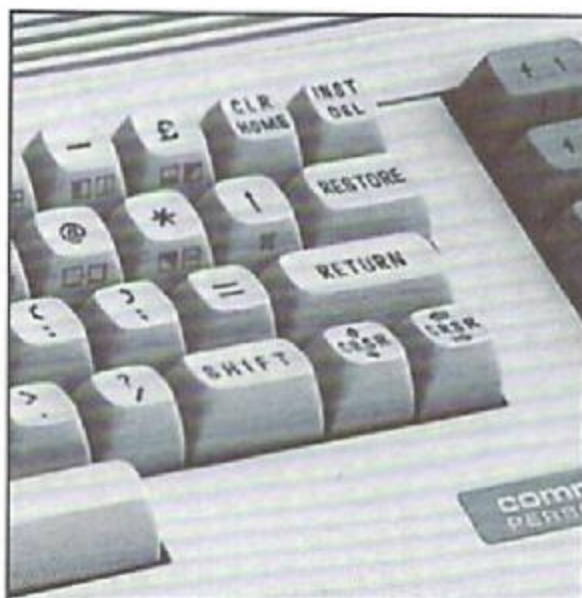
30 SYS65478,,15

```

In either case (64 or 128) you'll cut about a third of the time off of your disk file reading!

Kick It Into 2 MHz

If you write 64 programs which run on a 128 in 64 mode, you can speed up calculations dramatically by shifting the computer into 2 MHz mode. While this speeds up calculations, there is one side effect: the VIC chip can't update the screen properly in



this mode, so you'll see some garbage on the screen while running this way. If you think the display detracts from your program, you can easily blank the screen while running in 2 MHz mode. Here's a quick example of how to accomplish this:

```

100 REM SPEED TEST
110 I=1
120 POKE53265,PEEK(53265)AND23
130 REM SCREEN OFF
140 POKE53296,1:REM 2 MHZ
150 TIS="000000"
160 FORI=1TO10000:NEXT
170 T=TI
180 POKE53296,0:REM 1 MHZ
190 POKE53265,PEEK(53265)OR16:
200 REM SCREEN ON
210 PRINTT
220 TIS="000000"
230 FORI=1TO10000:NEXT
240 T=TI
250 PRINTT

```

This example program also serves as a test for the fast and slow modes. It will print two numbers indicating how many 60ths of a second it takes to execute the FOR/NEXT loops in lines 150 and 210. Remarks in the program point out the important POKE statements needed to change the processor speed and screen blanking.

One important note: Make sure you're in the standard 1 MHz mode for I/O functions like disk access—these won't work at 2 MHz!

To DO or Not to DO...

We suggest NOT! The BASIC 7.0 version supplied in the Commodore 128 has a lot of high-powered commands that are lacking in the Commodore 64's BASIC 2.0. Many of these commands, however, are far slower at accomplishing tasks that can be done with BASIC 2.0. It's not all that surprising, really—the more powerful the command, the more likely it is to have a lot of overhead.

The example I've picked on here is using a DO/WHILE/LOOP construct to replace a FOR/NEXT loop. Here's the test program:

```

100 REM DO LOOP SPEED TEST
110 I=1
120 TIS="000000"
130 DOWHILEI<10000:I=I+1:LOOP
140 T=TI
150 PRINTT
160 TIS="000000"
170 FORI=1TO10000:NEXT
180 T=TI
190 PRINTT

```

The test takes a couple of minutes to run, but the results will show that using a FOR/NEXT loop is better than *seven times* faster than the DO/WHILE/LOOP construct! You'll get slightly better—though similar—results using the DO/UNTIL/LOOP construct; you can test this by changing line 130 in the example to read:

```

130 DOUNTILI=10000:I=I+1:LOOP

```

We Need Your Top Tips!

Each issue we'll print the very best tips we receive from our readers. Send your tips on using and programming your Commodore 64 or 128 to:

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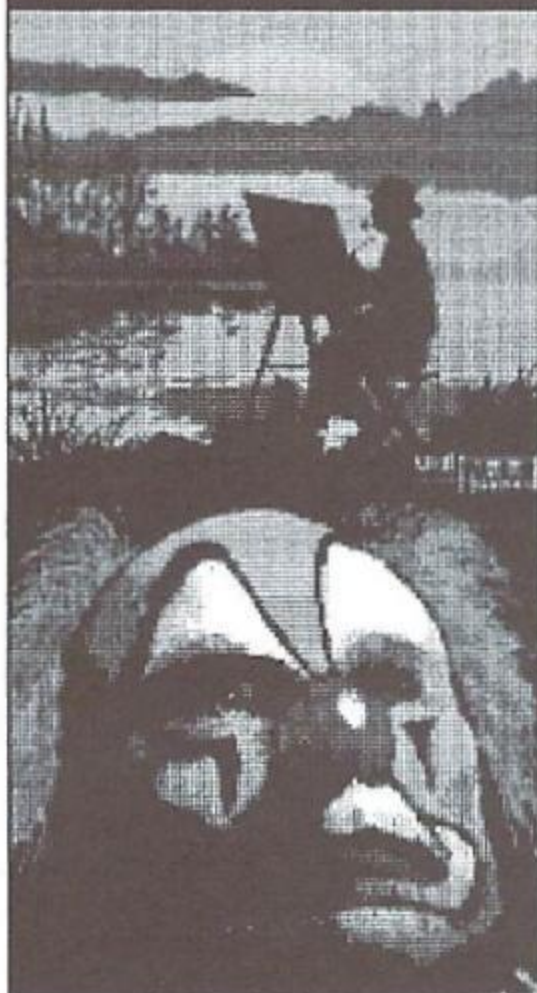
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CWH074

Just For Starters

by Steve Vander Ark



MORE COMMODORE BASICS FOR THE BEGINNER

This is the seventh installment of this column. Since *Commodore World* comes out about every other month, that means I've been writing this for a year now. So now it's time for an official "Year In Review" column. Well, piece of a column, anyway.

There's a good reason for doing this, actually. Every issue, this column continues the discussions from the column before it, and the whole year's worth of columns has (hopefully) a certain continuity to it. So if you haven't been along from the beginning, you might find yourself a bit confused. A brief rundown of where we've been will help you catch up.

This column started off a year ago with a discussion of how a computer communicates with its own hardware and with the user. I spent some time talking about some of the most often used hardware and software for the Commodore. I had just spent a column talking about the disk drive when I took something of a detour and started a series of columns about the BASIC programming language. We began writing a small program which placed some text on the screen. We experimented with the screen editor and learned how to save a program we'd written. I also promised to talk about some other BASIC commands you can use to order your disk drive around.

Not all beginning Commodore users want to be BASIC programmers, however; so in this issue I'll start something new. The column itself is going to get bigger and split into two sections, one to talk about elementary programming in BASIC and the other to talk about non-programming matters. This way I can keep both discussions going and hopefully provide even more information you need and want. As always,



I invite your comments and questions. The best way to contact me is by email. My Internet address is S.VANDERARK@GENIE.GEIS.COM. If you have an account on GENIE, you can email directly by using my screen name: S.VANDERARK. I also have an account on America OnLine, where my screen name is SteveVark.

Alright, let's get down to business.

Basic BASIC

Learning to program in BASIC is really not that hard. Once you catch on to the general process—typing commands with a line number in front, then typing the command RUN without a line number to see what happens—you can pretty much do anything at all. The computer is yours to control. You can tell it to place words on the screen and then change the colors of those words and the background. You can use those "quote mode" cursor commands I showed you last time to make those words appear anywhere you like. There are BASIC commands for all these things. You won't be creating some big, powerful word processor program with those commands, but

you can certainly have some fun experimenting. Let's try out a few of these commands in 64 mode. (If you have a 128, type GO64 and press return, then answer Y to the prompt).

The colors of the screen, of the border around the outside of the screen, and of the text are stored in certain places in the memory of the computer. These locations are fixed, by which I mean that if you look at any time you will find the color listed there. Locations within the memory of the computer are identified by number, so we can affect those colors if we just know where to look (and then know how to mess with what you find there.) The colors themselves are identified by numbers as well. So essentially we need to change the number stored in a numbered location in memory in order to change the color.

BASIC includes a command designed to allow programmers to look at any given memory location. That command is quaintly called PEEK, since you use it to PEEK into memory. The command PEEK requires a parameter (which as you recall is some bit of additional information a command needs to do its job). We'll tell it the number of the location of the text color, for example, and we should be able to find out what color number is stored there. The way that works is like this: PEEK (646). The (646) is a parameter telling the PEEK command where to look.

Well, that's all well and good, but if that was all we typed, the computer would be baffled. Go ahead and try it; you'll see "SYNTAX ERROR" appear, which as you may recall is the computer's way of saying "What's THAT supposed to mean?!" The problem is that, while we did tell the computer where to look, we never told it what it was supposed to do with the number it found there. That may seem kind of dim, but computers *are*

dim, frankly. We have to specify everything. In this case, let's tell the computer to remember the number it finds in location 646 so we can print it out later. We'll assign that number, whatever it is, a temporary name so both we and the computer can keep track of it. We'll refer to that number as "X" for now.

So, here's what we'll tell our computer: "Look at memory location 646 and remember the number you find there by calling it X." In BASIC, that sentence looks like this:

```
10 X=PEEK(646)
```

Now we can do anything we want with X and the computer will know that we mean the number we assigned to X with our PEEK command. But what good is that, you might say? What can we ever do with a number being called by a letter? Quite a bit, actually. The letter name we give to a number is called a *variable*, and it is a very powerful tool in programming. For now, we'll use that variable, X, to print out the color number of our text on the screen. We know how to put things on the screen—the PRINT command—so let's add a line to our program to do that:

```
10 X=PEEK(646) (Assigns the number we find in 646, the
                color number of our text, to a variable
                called X)
20 PRINT X      (Tells the computer to print whatever X is,
                on the screen.)
```

If you type this in and run it, you will see a number appear. On a 64 with that initial blue screen showing, you'll see the number 14, which stands for light blue. The text on your screen, as you can clearly see, is light blue, so the color number in 646 says so.

But who cares? So it's 14. Now you know; why type in the program? Now if it were possible to *change* that color number, then we'd have something. Well, you can. There's another BASIC command that lets you place a new number in a memory location, and if you do that to the text color location, 646, you will change the color of the text on the screen. That command is even more quaintly named than PEEK. Here's the way it works:

```
10 POKE 646,0
```

That command told the computer to put ("poke") a number into memory location 646. The memory location came first, then after a comma came the number I wanted to put there. The number 0 is the number code name for the color black. If we type in that command, any text that comes up on the screen afterwards will be black, not light blue. Go ahead, try it.

You can do that as many times as you like. The numbers run from 0 (black) through 15. After that, the colors just repeat; 16 is the same as 0, in other words. I won't list all the colors here, I'll let you discover them on your own. Remember, when you POKE the color number of the background into 646, the text becomes invisible. After you POKE a new number in, try that PEEK program again and see if the number you POKEd is now assigned to X. It should be. That's one of the nice things about variables like that; they can change in value and you don't have to retype the program, since the computer just assigns the new number to the letter.

Next issue we'll put some of this together into a short program which will let a user enter a number and then tell the computer to change to that color immediately. We'll talk about how to take input from a user and put it to use within a program. The power of variables will become even more obvious then.

More about disk drives

A few issues back, I described some of the different types of software you might use with your Commodore. At that time, I mentioned that if you use productivity tools like a word processor or spreadsheet, you will be creating files, or sets of data, which in many cases you will want to save. I suggested organizing a set of disks to hold those files, for example one for correspondence, one for spreadsheets, and so on. At that time, however, I didn't really give you any clue about how to do that. I mean, how do you see what's on a disk? How do you copy a file from one disk onto another? There must be a way.

There are actually several ways. One is to use BASIC commands. If you are working with a 128 that isn't too bad, since the 128's version of BASIC has some relatively simple commands for that kind of thing. If you use the 64, however, you might want to look for an easier route. The 64 commands are not exactly user-friendly. They involve a lot of typing of complicated letters and numbers, all requiring very exact punctuation and spacings. I was going to include some here, but I can't find my disk drive manual and without that I will never get it right. In order to include the two commands you see at the end of this column, I had to log on to GENIE and ask around.

There is a much better alternative, one which requires very little typing at all. The disk that came with your disk drive has several excellent programs on it, including a copy program to copy files and a very useful utility called "C-64 WEDGE." Once "WEDGE" is installed, you can load programs from a disk very easily and also call up a list of the files on a disk. This file list is called the disk's *directory*. Instructions for using the wedge program are found in the manual. JiffyDOS from CMD provides a built-in DOS wedge, and I highly recommend it—and that's not just because they pay me.

Before you can use these programs to fill your disks full of files, however, you will need to get the disks themselves ready for use by your Commodore equipment. It's necessary for a disk to be *formatted* before you use it. Formatting is a process by which your disk drive maps out the storage space of a disk in a particular arrangement used exclusively by Commodore equipment. Your drive actually writes information onto the disk, setting aside space for it to keep track of what's on that disk, identifying each separate section of the whole disk. This process gets your disk ready to use; along the way, it completely erases whatever may have been on that disk before. That's good reason to be extra careful with formatting.

In order to format a disk, type in one of these two commands. Make sure the disk you have in your drive is one that you want to be completely erased. Also, be sure to type carefully; every little comma and quotation mark is essential. On the 64, you'll type this convoluted mess:

```
OPEN 15,8,15,"N0:mydisk,id":CLOSE 15
```

Where you see "mydisk," type the name you want to give your disk. Where you see "id," type a two-character identification code. This code can be anything, really, although most people say you should come up with a unique one for every disk. The "8" toward the beginning specifies that you are using drive 8.

On the 128, you can save some wear and tear on your fingers by using this command:

```
HEADER "mydisk",id,Udrive#
```

The "mydisk" and "id" are the same as for the 64 version, and Udrive# means you type a letter U followed by the number of the disk drive you're using for the format. If you have only one drive, it will be number 8.



Foreign Exchange

By Joseph Gaudl



VIDEO PERFECTION FROM SCANNTRONIK

If there is one thing I have definitely learned in dealing with German C-64 hardware and software specialists over the last ten years it is this: They can and will solve a seemingly impossible task. Thilo Hermann solved the problem of the poor GEOS printout quality with his Perfect Print program and the FLASH 8 from Roßmüller transformed the C64 into a speed demon. Just when you thought there were no new Commodore challenges to take on, someone draws another line in the sand and waits for someone else to cross it. Take for instance the mixing and synchronizing of two completely different signal sources; that of the C64 and that of any normal videopicture. On paper, this task sounds relatively easy. In reality, however, we're dealing with a real hardware battle. The C64's video signal doesn't have the same amount of lines as a television or video camera. The key is to digitize the entire video signal of the C64 and save it in a buffer. Each point of the video source can then be read out and connected with the analogue point of the C64 picture and shown on the screen. The source signals are then tricked into synchronization. Sounds easy, right? Well it is, if you own the Digital Genlock from the Munich based hardware specialist Scanntronik. This very professional German computer company has been developing excellent hardware (Printfox, Handyscanner to name a few) for the C64/128 since 1983 and the Digital Genlock is the first in a line of video peripherals for the Commodore user.

Here's a quick look at the unit. The Genlock itself is black and a bit on the large size. This is due to the two separate circuit boards inside. The top board is the digital part of Genlock. Here the computer picture is frozen and then logged into the video picture where the colors are mixed. On



the bottom board we find the analogue part of Genlock where the digital picture signal is transformed into an analogue video signal. The unit is very easy to install and attaches to both a video camera or recorder and your computer in a few simple steps. Additional jacks on the rear panel are for other Scanntronik cartridges that can be used in connection with the Genlock as well as for the normal input/output devices. There are all kinds of knobs and LED's on the front panel which control the input and output signals and color.

Four full tone colors are offered for the title or scroll text as well as a transparent black and their intensity is adjustable to approximately 184 different tones. A mix mode allows you to create spectacular effects by casting a kind of transparent veil over the entire videopicture. For video experts who enjoy experimentation, the sky is the limit!

The Scanntronik company is not one to "rest on its laurels". Firm president, Hubert Mugrauer knows how to capitalize on a good thing. There was bound to be additional hardware which would enhance the Genlock and similar hardware for those whose knowledge of working with video is limited. During the summer of 94, Scanntronik introduced Genbox, Videoprofi and Videofox 2. Genbox is kind of like Genlock's little brother. It can also mix the two different signals, generate titles etc. but does not have Genlock's

expandability and is recommended for the advanced user. Videoprofi is a cartridge which can generate letters and does color scrolling or horizontal running text by itself or in connection with Genlock and is basically a no frills attached tool producing excellent results. Videofox 2 is a simple software package which combines text and graphics to produce stunning blending and scrolling text effects. If I were to list the products in order of their price, ease of use and function I would start with the Videofox 2, then move to the Videoprofi, then to the Genbox and finally reach the professional's choice, the Genlock. In October 1994 I was able to see a demonstration of all these products. I was very impressed as I saw myself on the screen and watched as my name, rank and serial number scrolled across my chest!

Beware, however, as these babies are not cheap! Europeans have to fork out about \$550.00 for the Genlock. Genbox will set you back about \$350.00, the Videoprofi about \$160.00 and Videofox 2 runs at \$86. Those video freaks out there will have to wait a bit before you see most of these products on the US market. Scanntronik is looking into the cost and effort of adapting the units to the US NTSC television system. They currently only run with the European PAL system and special SCART/RGB television jacks. Mr. Mugrauer knows that the US market would embrace such a tool and is working with CMD as a potential distributor in the US and Canada. Commodore World will most definitely inform its readers of the availability and price of Scanntronik's products as soon as we can, so stay tuned and continue to watch this column for fast breaking news concerning European developments for the Commodore user!



SURVIVING THE 90'S

by Charles A. Christianson

After eight years in the Commodore business, I've been asked just about every question imaginable. However, there are a couple of questions that I hear more often than most: "Should I keep my C-64?" and "What type of support can I expect in the future?"

If we're to maintain the viability of the Commodore C-64 and C-128 computer, there are some important factors that must be addressed. The first that comes to mind is communication; it's imperative that Commodore users stay in touch with what's happening in the market place and other Commodore users. Another important aspect of keeping your C-64 or C-128 going through the 1990's is hardware and software suppliers. Users are concerned about the availability of additional products for their computer, and rightly so; we'll show you what's available—and where to go to get it. We also need to maintain our equipment; what you can do yourself, and where to send it for service should that become necessary.

It's my intention

to give you enough information to guide you in your quest to prolong the existence and success of this computer platform and to offer some insight into the things that you as an individual can do to see this market thrive.

Communication

One of the most important factors in maintaining the viability of the Commodore C-64 and C-128 is communication. As we move into a period where we can no longer expect support from Commodore, it's critical that Commodore users make special efforts to help each other. The rewards in helping others are numerous—it helps keep both you and those you help excited about what you can do with your system, and keeps users from falling out of touch with the market.

Far too many users have been lost to isolation and indifference. There's strength in numbers, and it's our responsibility to keep those numbers from shrinking further. As active members of the Commodore community, we must seek out other users that are less "in tune" and show them the resources that are still available.

Next point: don't let your computer die with you. I don't mean that literally, but if you're moving on to another platform, pass your Commodore on to a new user and provide them with as much current information as possible. Urge other users you know to do the same. Put every working C-64 and 128 in the hands of someone who'll use it. Again, this helps to maintain a stable base, and you're bound to make somebody real happy to boot!

Communication between users, resellers and manufacturers takes place at several levels: user groups, on-line services, direct mail and publications are among the common ways that users, vendors and other



supporters can communicate with each other. Let's explore these methods in a little more detail to see how effect us and our future.

User Groups

User Groups have long since been the backbone of the Commodore community, and they provide vital services to their members. These groups bring together diverse groups of people with one common bond: a passion for learning about and using their Commodore computers.

I've visited many groups over the years, and have always been amazed by the diversity: doctors, lawyers, factory workers, students, public servants, disabled persons, housewives and retirees all meeting to share what they know.

Every member of a group offers something unique and contributes to the overall success of the group. Individual abilities vary from basic use to complex programming. There are those who have owned their Commodore for many years and thoroughly understand its operation; those who thrive on writing their own software and/or customizing existing software to suit specific needs; hardware experts, application specialists, casual users, and beginners. It's this diversity that makes belonging to a group interesting.

Typical group meetings often cover a wide variety of topics: group business, demonstrations, open discussion, disks from the club library, and refreshments (this has always been my personal favorite). Meetings give members an opportunity to see what's new, exchange ideas, help others with problems they may be having with a particular piece of hardware or software. Sometimes it's nice just to take time out to chat with a friend who shares common interests.

Out of all of the group meetings I've had the pleasure of attending, I have never gone an entire evening without picking up at least one new piece of information—and I believe that this is probably true for most members of a group.

User groups go a long way toward maintaining the cohesiveness of our market, and fill an important role in the distribution of knowledge. If you currently belong to a club, make an extra effort to recruit new members; if you're not yet involved with a group—join one! We've provided a list of the groups currently registered with *Commodore World* at the end of this article; if your group isn't listed, or if our information on your club is incorrect, please be sure to send us updated information.

On-line Services & BBS's

Another form of communication which has become increasingly important to Commodore users is telecommunications. Through the use of

Adapting Standard Components

80 Column Monitors

A little known fact is that you can run a standard CGA monitor on a C-128. It will hook up directly to your RGB output and offer the same quality you would expect from any CBM monitor. These monitors are very inexpensive and can be found readily from second hand sources.

A/B Printer Switch Box

All you need to do is buy a standard centronics A/B switch. These are available through most computer resellers including your local Radio Shack. You will need the following components: a serial to parallel printer interface or geoCable, centronics switch box, two centronics printers and two centronics to centronics cables. All that is left now is to hook up your cables and begin printing. There is one drawback, however, to using this configuration: you must have printers that are equipped with centronics ports—it will not work with 'Commodore-ready' printers.

128-D Keyboard Extension

The 128-D keyboard cable is easily extended with a standard male to DB-25 female cable. Simply unplug the keyboard, plug it into one end of the cable and plug the cable into the computer.

Modems

You can hook up standard Hayes-compatible RS-232 external modems with any of a number of interfaces. CMD's SwiftLink, Arotek's Com-Modem Adapter, and the Hatronics Hart Cartridge are all commercial interfaces suited to this purpose (see *Commodore World* Issue 4 for more info on these). You can also find plans for building your own RS-232 interfaces such as the Datapump (you'll find instructions for this in a file on many online services and BBS's) or the plans presented in *Commodore World's* Hard Tips (*Commodore World* Issue 4). Plus, with the advent of geoFAX (coming soon from Click Here Software), GEOS users with a SwiftLink and a Group 3/Class 2 faxmodem will be able to send and receive faxes.

a modem, you can stay in contact with hundreds of other users each day without ever leaving the comfort of your own home. This method of communication is more important now than ever before. Why, you ask? Because users are scattered all over the country and need some way of staying in touch with other users. It isn't practical to think that there is a user group within driving distance of every Commodore user. Plus with support being scattered all over the country, people need a way that they can keep in touch whenever possible.

Electronic Bulletin Board Services and commercial on-line services are generally accessible 24 hours a day, 7 days a week. That means you can leave messages and retrieve answers at your convenience. Many companies offer support through on-line services. CMD offers on-line support via GENie, Internet and Fidonet; LoadStar recently started their own support BBS; and Commodore CEE (formerly CEE-64 Alive!) has been running a support board for quite some time. Utilizing these forms of communication, you can get timely help directly from vendors.

The *Information Superhighway* has become a buzzword in nearly every corner of the computing world over the past few months. With the Internet currently assuming that role, computer users all over the world are rushing out to buy telecommunications equipment so that they can get connected. The Internet is an expansive network of computer systems which connect millions of computer users around the world (See *CW* Issue 6 for more info on the Internet -Ed.).

Commodore users can find a plethora of information on the Internet; the comp.sys.cbm newsgroup, file transfer (ftp) sites, World-Wide Web pages, mailing lists, Internet mail, and a lot more are all easily available to anyone with Internet access.

While the vast resources available on the Internet appeals to many users, some will find the structure of commercial on-line services a little easier to handle. Most of these services provide Internet mail access in addition to a host of professional services such as airline, hotel and rental car reservations, news wires, sport scores, technical support areas, chat rooms, guest speakers and a full schedule of conferences covering various topics. On-line services usually offer a more structured environment and charge a base monthly fee for a specific number of hours and an hourly fee after that. Most have local access numbers that you call so that you need not make a long distance call to log-on. A list of popular services that provide Commodore support appears in the *On-Line Services* sidebar.

Another common form of telecommunications is the local BBS, or electronic 'Bulletin Board Systems'. At one time, such systems operating on Commodores numbered in the thousands; these were often small systems, running on a C-64 with as little as one or two 1541 disk drives. Though fewer in number, Commodore BBS systems today are much more sophisticated, using disk speed enhancements, accelerators, high speed modems, high capacity 3.5 inch disk drives, hard drives, and RAM devices such as RAMDrive and RAMLink. A number of Commodore BBS systems exist today with more than 2 Gigabytes of hard disk storage and/or 16 MB of RAM disk space. It's also quite common for BBS's operating on

other types of computers to provide support for Commodore users.

BBS systems offer somewhat different services than commercial on-line services. These local systems are often free, and operated by someone who has a deep interest in the Commodore or telecommunicating. They offer a convenient way to trade information locally and to get help with questions you may have. Many user groups run a BBS as a service for their members to provide easy access to the club's software library and as a convenient method for members to communicate with each other between meetings.

Overall, telecommunications is probably the most convenient way to maintain contact with

other individuals sharing similar interests. And although it's ideal for sharing information about the Commodore, it's also well suited for discussing most any topic, ranging from current events to swapping recipes.

Direct Mail

This method of communication is generally reserved for the various vendors who continue to support the Commodore market. It's equally as important for the companies offering services to stay in touch with you as it is for you to stay in touch with them. Obviously, they wish to sell you a product or service which is necessary to maintain the usefulness of your computer. Most companies

Commodore Vendors & Resources

64 Disk Connection, 4291 Holland Rd., Suite 562, Virginia Beach, VA 23452. [PD,CW]

ACS Computer and Video, Inc., 5344 Jimmy Carter Blvd., Norcross, GA 30093, (800) 962-4489. [H,S]

Andor House/Don Radler, 3907 Southeast 2nd Ave., Cape Coral, FL 33904. [S]

Angelo Pasquella - DMBBS, P.O. Box 71, Beachwood, NJ 08722-0071, (908) 349-9187. [B]

Antigrav Toolkit, P.O. Box 1074, Cambridge, MA 02142. [H]

Aprotek, 9323 W. Evans Creek Rd., Rogue River, OR 97537, (503) 582-2120. [H]

ArcTech Soft, P.O. Box 56911, North Pole, AK 99705-1911. [S]

Bare Bones Software, 940 4th Avenue, Suite #222, Huntington, WV 25701, (800) 638-1123. [S,U]

Brown Boxes, Inc., 26 Concord Rd., Bedford, MA 01730, (617) 275-0090. [H]

Bruno's Computer Warehouse, 510 Andover Park West, Tukwila, WA 98188, (206) 575-8737. [S]

Busy Bee Software, P.O. Box 206, St. David, AZ 85630, (520) 720-4103. [S]

Caloke Industries, P.O. Box 18477, Raytown, MO 64133. [PD,CW]

Centsible Software, P.O. Box 930, St. Joseph, MI 49085, (616) 428-9096. [S,CW]

ClickHere Software, P.O. Box 606, Charlotte, MI 48813. [GE,U]

CMD Direkt (CMD Europe), Postfach 58, Telfs, Austria A-6410, 43-5262-66080. [H,S,GE]

Commodore CEE, P.O. Box 232115, Sacramento, CA 95823. [P,S,CW]

Commodore Connection, 127 North Sante Fe Ave. #C, Vista, CA 92084-5401, (619) 945-8777. [S,H]

Commodore Country, 1420 Country Rd. 914, Burleson, TX 76028, (800) 676-6447. [H,S,GE,G,R]

Compsult Software, P.O. Box 5160, San Luis Obispo, CA 93403, (805) 544-6616. [S]

Compuquick Media Center, 3758 Town & Country Rd., Columbus, Ohio, (614) 235-1180. [H,R]

Compustuff, 2759 Medina Rd., Medina, OH 44256, (216) 725-7729. [S]

Computer Bargain Store, 3366 South 2300 East, Salt Lake City, UT 84109, (801) 466-8084. [H,CW]

CPI-Keystone Software, P.O. Box 8369, Pittsburgh, PA 15218, (412) 243-1049. [S,U]

Creative Micro Designs, Inc., P.O. Box 646, E. Longmeadow, MA 01028, (413) 525-0023. [H,S,G,GE,R,P,U,CW]

Creative Pixels, Ltd., P.O. Box 592, Library, PA 15129. [S,G,CW]

Cyberteck Software, 928 East BRd.way, Suite #317, Missoula, MT 59802-4303. [PD]

D-mail U.S.A., 91 Market St., Wappingers Falls, NY 12590, (914) 297-4800. [H]

Dick Estel, 3487 East Terrace, Fresno, CA, 93703. [GE,S]

Digi-Key, P.O. Box 677, Thief River Falls, MN 56701-0677, (800) 344-4539. [H]

Discount Computers and Software, 641 Southwest 152nd St., Seattle, WA 98166, (206) 431-0180. [S]

Disks O'Plenty Software, 8362 Pines Blvd. Suite 270, Pembroke Pines, FL 33024, (305) 963-7750. [PD]

Electric Boys Entertainment, 917B Brighton Rd., Purley, Surrey CR8 2BP, England, 44-81-668-7595. [H,S,G,GE,P]

EMS Computer Service, 4355 Kinney Rd., Ludington, MI 49431, (616) 845-1540. [S]

Epyx Incorporated, 1979 Palomar Oaks Way, Carlsbad, CA 92009, (619) 431-9888. [S]

Family Computers & Video Games, 510 South First St., Mount Vernon, WA 98273, (206) 336-3586. [S]

Fred Ogle - Color 64 BBS, P.O. Box 35427, Dundalk, MD 21222-7427. [B,CW]

Harv Harris, 981 Brown Thrush, Wichita, KS 67212. [S]

Harvey & Assoc., 1409 Mill St., Laramie, WY 82070, (307) 742-3275. [H,S,R,CW]

Henry Sopko, 2705 King St. East Apt #212, Hamilton, Ontario, CANADA, L8K1Y4. [U]

Herb's Discount Software, 4406 A Enterprise Place, Fremont, CA 94538, (510) 490-6335. [S]

Home-Spun Software, P.O. Box 1064DH, Estero, FL 33928. [S,U,CW]

Horse Feathers Graphics, N. 27310 Short Rd., Deer Park, WA 99006-9712. [S]

J.P. PBM Products By Mail, N. Sheridan Mall P.O. Box #60515, Downsview, Ontario M3L 1B0, Canada. [H,CW]

Jameco Electronics, 1355 Shoreway Rd., Belmont, CA 94002, (415) 592-8097. [H,PT]

Jason-Ranhem Co., 3105 Gayle Ln., Auburn, CA 95602, (800) 421-7731. [H]

John Green, 365 Smith St., Freeport, NY 11520. [G]

KFPDS Software, P.O. Box 470464, Los Angeles, CA 90047-0464. [S]

Lance Haffner Games, P.O. Box 100594, Nashville, TN 37224, (615) 242-2617. [G,S]

Living Proof, Ltd., P.O. Box 80714, Minneapolis, MN 55408-8714. [S,CW]

Lyben, P.O. Box 130, Sterling Heights, MI 48311-0130, (810) 268-8100. [D]

LynnCarthy Industries, P.O. Box 392, Boise, ID 83701-0392, (208) 383-0300. [P,H]

Mad Man Software, 1400 E. College Dr., Cheyenne, WY 82007-3298, (307) 632-1178. [S,CW]

Marshview Software Limited, P.O. Box 1212, Sackville, NB, Canada E0A3C0, (506) 364-0110. [S,G]

Master Software, 6 Hillery Court, Randallstown, MD 21133, (410) 922-2962. [S,H,CW]

attempt to distribute a full catalog on a regular basis which is much more costly than customers would guess. To give you an idea of the cost of printing and mailing a catalog, I've put together some loose numbers from a previous mailing of 15,000 CMD catalogs. Printing costs for a news print catalog were approximately \$1,150.00; bulk mail costs were approximately \$3,390.00; labelling and preparation cost approximately \$150.00. The total cost (not including costs to layout the catalog) was approximately \$6,690.00 to print and mail 15,000 catalogs. The point of the matter is, direct mail costs a lot of money. In other markets, this is just built into a company's overhead, and returns of two or three percent are

expected. I am the first to agree that it's a cost of doing business. However, companies that remain in the Commodore market must be very cost conscious in order to remain profitable. After all, businesses are not charities—they need to make a profit in order to survive. Companies that use direct mail in the Commodore market need even higher returns than two or three percent due to the lower volume of customers, and it's you, the customer, who dictates a company's profitability.

As a customer, there are some things you can do to help the remaining companies maximize their efforts to provide you with the best service. First, make sure you notify companies of an address change as soon as possible, so as to

minimize any losses resulting from undeliverable mail. Secondly, if you don't see a new catalog for a period of time, get in touch with the company and request one. Vendors like to know that you are still out there interested in what they have to offer. If you notice that you are receiving multiple copies of a catalogue with slightly different address labels, let them know so as to eliminate the duplication. Your help in keeping a mailing list clean is extremely helpful and can save companies hundreds of dollars over the years.

Publications

Those of you who have been using Commodore computers for a few years are bound to remember

Mega-Disk Software, P.O. Box 1554, Ellensburg, WA 98926-1554. [PD]

MEI/Micro Center, 1100 Steelwood Rd., Columbus, OH 43212, (800) 634-3478. [PR,MS]

Michael Bendure-CNET64/Network, 92 Lee Ave Apt N3, Newark, Ohio 43055, (614) 522-1302. [B]

Micro Applications and Appliances, 6417 Hawthorne St., Landover, MD 20785-1711. [S,G,U]

Micro R&D, 721 "O" St., Loup City, NE 68853, (800) 527-8797. [H]

Midwest Micro-Peripherals, 6910 US Route 36, East Fletcher, OH 45326, (800) 522-8080. [H]

Midwestern Diskette, 509 West Taylor, Creston, IA 50801, (800) 221-6332. [PR,MS]

Music Software Exchange, P.O. Box 533334, Orlando, FL 32853-3334. [S]

Nathan Fiedler, 5711 Mount Pleasant Rd., Bernville, PA 19506. [GE,S]

Novastar Game Company, P.O. Box 1813, Rocklin, CA 95677, (916) 624-7113. [G]

Novo Computers, P.O. Box 237, Mayfield, NSW 2304, Australia, 61-49-602-082. [H,S,GE]

Omni128 BBS, 4135 N. 36th St., Tacoma, WA 98407. [B]

Parsec, P.O. Box 111, Salem, MA 01970. [P,S,GE,U]

Performance Peripherals, Inc., 5 Upper Loudon Rd., Loudonville, NY 12211, (518) 436-0485. [H]

PHD Software Systems, P.O. Box 23, Merville, IA 51039-0023, (712) 873-3463. [S]

Plus Electronics, Postfach 100 263, D-30198, Seelze, Germany, 49-5137-50477. [H,S,GE]

Quincy Softworks, 9479 E. Whitmore Ave., Hughson, CA 95326-9745. [GE,S]

R. and D. Enterprises, R.R. #5 Green Lane, Newmarket, Ontario L3Y7V1, Canada. (905) 853-5869. [S,H]

Reliance Forms & Supplies Inc., 23920 Freeway Park Dr., Farmington Hills, MI 48334, (810) 478-6620. [MS]

Russian Wyatt, 8614 Bramble Ln. #203, Randallstown, MD 21133. [S,G]

Sandinges Import and Data, Norsbergvagen 8-B, S-302 30, Halmstad, Sweden, 46-351-22164. [H,S,P]

Skyles Electric Works, P.O. Box 1984, Cupertino, CA 95015-1984, (408) 737-1632. [H,S,U]

Softdisk Publishing, Box 30008, Shreveport, LA 71130-0008, (800) 594-3370. [P,SCW]

Softside Supply, 1002 E. Main St., Apt. 3, New Albany, IN 47151. [GE]

Software Clearance Center, 2025 Southwest Freeway, Houston, TX 77098, (800) 825-1990. [S]

Software Hut, 313 Hendersen, Sharon Hill, PA 19079, (800) 932-6442. [H,S,GE,G,R,CW]

Software Support International, 2700 N.E. Andresen Rd. Suite A-10, Vancouver, WA 98661, (800) 356-1179. [H,S,GE,BO,G,CW]

SOGWAP Software, 115 Bellmont Rd., Decatur, IN 46733, (219) 724-3900. [S]

Spheretron (Schnedler Systems), P.O. Box 5964, Asheville, NC 28813, (704) 274-4646. [H]

Surplus Computer Software, 3301 South Harbor Blvd., Santa Anna, CA 92704, (714) 751-2667. [S]

Suzart, 1529 Longmont Ave., Boise, ID 83706-3731. [GE]

Tech Star Computer Center, 7036 188th South, Kent, WA 98032, (206) 251-9040. [H,S]

Terrapin Software, 400 Riverside St., Portland, ME 04103-1068, (800) 972-8200. [S,G,U]

The FGM Connection, P.O. Box 2206, Roseburg, OR 97470, (503) 673-2234. [S,CW]

The Soft Group, P.O. Box 111, Montgomery, IL 60538, (708) 851-6667. [UK]

Threshold Productions, 17730 15th Ave., NE Suite #229, Seattle, WA 98155, (206) 361-1332. [S]

Titus Software, 20432 Corisco St., Chatsworth, CA 91311, (818) 709-3692. [S,G]

US Commodore Support, 1192 S. Nome St. Suite B, Aurora, CO 80012, (303) 751-3247. [H,S]

User's Corner, 1110 East Jackson, Medford, OR 97504, (503) 773-8868. [S]

Virginia Micro Systems, 13646 Jeff Davis Highway, Woodridge, VA 22191, (703) 491-6502. [H,S]

West River Computer Center, 1212 Ordegon, Rapid City, SD 57701-2006, (605) 348-3389. [S]

Yanney Software, P.O. Box 224, Lebanon, PA 17042. [S,CW]

VENDOR SERVICE CODES

- B - BBS Software
- BO - Books
- CW - See Advertisement in this issue
- D - Disks and Supplies
- G - Games
- GE - GEOS
- H - Hardware
- P - Publication
- PD - Public Domain Software
- R - Repair
- S - Software
- U - Utilities

the many publications that were available such as RUN, Compute's Gazette, Commodore, INFO, Transactor, Ahoy, and GEOWORLD. Some of these magazines had in excess of 100,000 subscribers, and could be found on virtually every newsstand in the country. For those of you who haven't been around quite so long, do yourself a favor and get your hands on some of these old magazines; they're loaded with valuable information and programs.

In more recent times, a whole new breed of publishers have materialized to fill the void which left by the exodus of their predecessors. These publishers offer a wide variety of formats and styles sure to suit most any taste. Today, publications are being produced by people who have a dedication to this platform—more so than the large publishing corporations who were more concerned with their bottom line and dropped out when subscription numbers dipped.

Current publications can be split into three categories: Magazines, Periodicals and Newsletters. A list of some of the larger publications appears in the *Publications for Commodore Enthusiasts* sidebar.

Publications provide users with important information about current market conditions, new products, reviews, programming and application tips, and serve as a source for finding products and services through their advertisers. Publications provide information on a one to one basis with the reader instead of requiring some method of group participation.

All forms of communication are extremely important to every Commodore user and it's important for Commodore enthusiasts to make use of the various lines of communication. It is, after all, the participation of users that will ultimately make or break this market. So please, go out of your way to play an active role, make

contact with fellow users that have fallen out of touch with the market, and get abandoned machines that are stored away into the hands of an active user. Above all, support those companies and individuals that are continuing to keep the lines of communication open.

Hardware and Software Sources

Every Commodore user knows how frustrating it can be to find hardware, software, services and supplies for the C-64 or C-128, especially when you don't know where to go. However, once contact is made with the right companies and individuals, finding product is not very difficult. In the past few years distribution channels have shifted from local retailers and mass merchants to mail order firms. This shift has brought both positive and negative results. Some of the positive results include lower prices and access to a larger variety of products. On the negative side, this eliminates the instant gratification you get when you walk into a local store and purchase something. You also lose the local contact for support. Often times, Commodore users are lost to other platforms when they no longer have the ability to buy products locally and are not aware of other options.

Believe it or not, there are tremendous supplies of Commodore hardware and software in the distribution channels. This I know first hand. CMD has been in contact with a number of liquidators and resellers who have warehouses stocked with original C-64/128 hardware and software. We're finding new sources for product every week. And I'm sure that we're not the only ones out there looking. Many companies, most of whom advertise in *Commodore World*, have been very successful at finding product and making it available to the user. A prime example is Software Support International, who specializes in a wide array of software. During a recent discussion with the company's owner, Les Lawrence, I was told that he has a tremendous supply of Commodore software and that he had just acquired the balance of Tenex's Commodore inventory.

One important note with regards to new hardware and software... *buy while you can!* In many cases, these products are a nonrenewable resource; their availability is limited to what has already been produced, and what we as retailers can purchase at liquidations and closeouts. So don't procrastinate or wait until there's a fire sale—supplies may not last long.

Even though some Commodore-ready hardware is still available, it makes more sense in many cases to buy something that is PC compatible and adapt it for use on the C-64 or C-128. Printers are a prime example of this.

Publications for Commodore Enthusiasts

Publication	Issues/yr.	Format	Pages	Disks	Sub. Price
Commodore World Magazine P.O. Box 646 E. Longmeadow, MA 01028 (800) 638-3263	8	8.5 x 11	54		US: \$29.95 Canada: \$35.95 Other: \$57.95
Loadstar 64 Loadstar 128 Soft Disk Publishing P.O. Box 30008 Shreveport, LA 71130-0008 (318) 221-8718	12 4	5.25/3.5 5.25/3.5		2/1 1/1	LS64 US: \$89.95 Other: \$109.95 LS128 US: \$39.95 Other: \$49.95 LS64&128 US: \$119.95 Other: \$149.95
Diehard Magazine Diehard Spinner Disk Lynn Carthy Industries P.O. Box 392 Boise, ID 83701-0392 (208) 383-0300	6 6	8.5 x 11 5.25	34	1*	Magazine only: \$16.97 w/Spinner: \$55.97
The Underground Scott Eggleston 4574 Via Santa Maria Santa Maria, CA 93455	6	5.5 x 4.25	30		US: \$11.00 Canada: \$12.50 Other: \$21.50
Twin Cities 128/64 Parsec P.O. Box 111 Salem, MA 01970-0111	2-3 2-3	5.5 x 4.25 5.25	56	1	US, Can., Mex.: \$24.00 for 6 issues. Others: \$36.00 (Disk included)
Commodore Cee P.O. Box 232115 Sacramento, CA 95823	6	5.25		3	US: \$36.00
Commodore Network P.O. Box 232115 Sacramento, CA 95823	12	8.5 x 11	UK		US: \$40.00
64'er Magazine Magna Media Postfach 1304 D-85531, Haar bei Munich Germany	12 12	8.5 x 12 5.25	58	1	Germany: DM 105.00 US: DM 129.00 (Disk included)

*Disk optional. Note: All prices given in U.S. Dollars except for 64'er, given in Deutch Marks (current rate of exchange approx. DM 1.40 = US \$1.00). Information for Commodore Format (England) not given (currently not accepting new subscriptions).

Today's printers are far superior to those of yesteryear, and supplies for them (like ribbons) are readily available. Through the use of a printer interface you can use most any modern printer. The cost is generally a little more, but you'll end up with a printer that is usable on most any platform and is capable of giving you far better quality when used with software capable of taking advantage of it. This same example applies to a host of products ranging from Hayes compatible modems to 80 column monitors. See the sidebar *Adapting Standard Components* for more information on this subject.

Original CBM equipment is not the only new equipment to be had. There are numerous companies producing new hardware ranging from hard disk drives to utility cartridges. In most cases, these manufacturers are producing high quality devices that outperform their predecessors. It's important that Commodore users, as a group, support such companies, as they are the lifeblood of the market. Without the infusions of new technology these companies bring, the market will further stagnate and eventually die. The more support that is offered to these companies, the more likely they will be able to produce new products for your computer in the future.

In addition to new product, there is a great supply of used products which may be right under your nose. Garage sales, flea markets, auctions and the classified ads are a great source for used Commodore equipment. In many cases people are just about giving the stuff away to interested parties. Granted, buying through these channels holds more risk than buying from a reputable company—but the payoffs can sometimes be

worth it. I spoke with a gentleman just today who found a 128-D and 1902 monitor in nearly new condition at his local Goodwill store for just \$35.00. Unbelievable!

Once again, everything goes back to communication. If you take the time to remain active within the Commodore community, you will surely find plenty of sources for hardware and software.

Service and Maintenance

At a time when some items are becoming hard to replace, we all need to take steps to maintain the equipment we have. First, and foremost, we should follow some simple guidelines to protecting our equipment and perform some very routine preventative maintenance. Between service calls, there are many steps that can be taken to insure the proper performance of your equipment.

- Place quality surge protectors on all power sources and telephone lines that are connected to your computer or modem. Most people neglect the surge protection on the phone line which can just as easily introduce serious damage to computers and drives during electrical storms.
- Avoid zapping your computer and drives with static electricity. Most people don't realize that you can hold up to 30,000 volts in your finger tip from a simple walk across the carpet. The best way to prevent static discharge is a small grounding tab or mat on or under your keyboard. By touching the grounded surface before you touch your computer or monitor, you eliminate the potential for a disastrous static discharge. Conductive mats and ground straps are available at any Radio Shack and other electronics shops. Another preventative measure is to use Static Guard on carpets and furnishings that are around your system. These measures can go a long way toward eliminating sources of static, and save you a lot of expensive repairs later on.

- Avoid plugging in or unplugging peripherals while your equipment is powered up. It's very easy to cause damage when attaching or detaching components from the various ports.
- Keep your keyboard clean. You'd be amazed at the number of repairs that are required as a result of your favorite beverage being spilled onto the keyboard. Dust and debris can also shorten the life of your equipment. Using dust covers and keeping your equipment in a *friendly environment* will greatly enhance its life expectancy. Keep the cat away, too.
- Keep all components and power supplies well ventilated. Avoid stacking drives too close together and don't lay stacks of paper and junk on top, alongside, or next to the vents in the case.

Those vents are there for a good reason and do perform a vital role in cooling the device. Heat is a leading killer of Commodore equipment, especially 1541 drives and power supplies.

- Turn off your equipment when it's not in use. It isn't good to let computer equipment run idle or to leave an image on the screen for long periods of time, and results in unnecessary wear.

- Avoid crimping and stretching cables. All too often cables are stuffed into small spaces at sharp angles. This can cause damage to the cables and ultimately result in the need to replace it. Cables stretched to their limit can also become damaged, or worse yet, the connector they plug into may become damaged through stress.

- Purchase and use a good 5.25" or 3.5" head cleaner on a regular basis. Any standard 5.25" or 3.5" disk cleaner kit will do. This helps remove excess residue that can damage the heads as well as your disks.

- Don't use old disks. Disks that are in poor condition or are very old can damage the heads in your drive. For this reason, it's important to use good quality disks and to maintain backup copies of irreplaceable programs.

- Make backups of all of your original software. As disks get old, they begin to deteriorate from use. The term 'bit rot' is commonly used to describe this condition. There are a lot of older programs that cannot be replaced when the disk goes bad, so it's crucial to maintain working backup disks. To aid in the copying process, use freeze cartridges such as Action Replay and Super Snapshot, or a parameter copier like Maverick.

These are just a few suggestions for maintaining your system. The best preventative maintenance is just good common sense. If you have additional suggestions, please drop us a letter—we'll be happy to pass them on to our other readers.

The Road Ahead

In closing, I'd like to emphasize importance of your role in the future of this market. It's very important to everyone—users and vendors alike—to do everything possible to promote the use of the C-64 and C-128 and to help maintain open lines of communication between those who remain in our market. So long as we can maintain the installed base and distribute the vast amounts of information which surrounds this market, there's no reason that we shouldn't be able to look forward to getting several more years of use from our systems. Go out and join a user group, get on-line, request catalogs from dealers, tell your friends about some method of keeping in touch with the market.. but above all, remain active and make sure people know you are!



On-Line Services Providing Access For Commodore Users

CompuServe

P.O. Box 20212
Columbus, OH 43220
1-800-848-8990

Delphi

1030 Massachusetts Ave.
Cambridge, MA 02138
1-800-695-4005

GEIE

401 N. Washington St.
Rockville, MD 20850
1-800-638-9636

Commodore User Groups

Alabama

Birmingham Commodore Club, PO Box 59564, Birmingham, AL, 35259-9564
H.A.C.K.S., PO Box 14356, Huntsville, AL, 35815

Alaska

Anchorage Commodore User's Group, PO Box 104615, Anchorage, AK, 99510-4615

Sitka Commodore User's Group, PO Box 2204, Sitka, AK, 99835

Arizona

Arizona Commodore Users Group, P.O. Box 27201, Tempe, AZ, 85285-7201

Busy-Bee User Group, 2634 East Malvern Street, Tucson, AZ, 85716

Catalina Commodore Computer Club, Inc., PO Box 32548, Tucson, AZ, 85751-2548

Arkansas

Northwest Arkansas C.U.G., P.O. Box 2925, Fayetteville, AR, 72702-2925

California

South Bay Commodore User's Group, PO Box 1176, Redondo Beach, CA 90278

Commodore 64 West Users Group, 2306 W. 180th Street, Torrance, CA 90504

Southern California C.U.G., 2059 Cedar Ave., #11, Long Beach, CA 90806-4616

C-128 West User's Group, 17047 Devanah St., Covina, CA 91722

Southeast San Diego C-64 User's Group, 258 Euclid Ave #B, San Diego, CA 92114-3640

Club 64, P.O. Box 514, Patton, CA 92369

Orange County Commodore Club, c/o 439-102 Fair Drive, Costa Mesa, CA 92626

Commodore Technical User's Group, 2231 E. Trenton Ave., Orange, CA 92667

Central Coast Commodore User's Group, 3896 Berwyn Drive, Santa Maria, CA 93455

The Fresno Sixty-Fourum, PO Box 16098, Fresno, CA 93755

Diablo Valley Commodore User's Group, 1896-D Lynnwood Rd., Concord, CA 94520

Commodore Hayward User Group, c/o Vernon Viani, 4586 Glenn St., Fremont, CA 94536

FUNHUG, 814 Valley Run, Hercules, CA 94547-1440

Lake County Computer Users, 7827 Evergreen Drive, Kelseyville, CA 95451

Sacramento Commodore Computer Club, P.O. Box 13393, Sacramento, CA 95813-3393

Hub Area Commodore Club, 7127 Arrowhead Trail, Browns Valley, C, 95918-9630

Colorado

FC C3, 1713 Valley Forge Ave., Ft. Collins, CO, 80526

Front Range Commodore Club, PO Box 272, Niwot, CO, 80544-0272

Western Slope Commodore User Group, P.O. Box 81, Mack, CO 81525

Connecticut

Capitol Region Commodore Computer Club, P.O. Box 2372, Vernon, CT 06066

Fairfield County C.U.G., P.O. Box 212, Danbury, CT 06813

Delaware

First State Commodore Club, PO Box 1313, Dover, DE 19903

Florida

Commodore Computer Club of Jacksonville, 141 Mango Court, Middleburg, FL, 32068

Port Orange Commodore User's Group, 52 Windward Crt., Port Orange, FL 32127

Gainesville Commodore User's Group, PO Box 90212, Gainesville, FL 32607

Titusville Commodore Club, 890 Alford Street, Titusville, FL 32796

El-Shift-Oh, Inc., PO Box 361348, Melbourne, FL 32936-1348

M.I.C.E., 11110 Bird Road, Miami, FL 33165-4417

Tampa Commodore User's Group, PO Box 27141, Tampa, FL 33688

Comm. U. G. of South West Florida, PO Box 7692, Ft. Myers, FL 33911

Manasota Commodore User's Group, PO Box 698, Oneco, FL 34264-6618

Commodore User's Group of Venice, PO Box 3325, Venice, FL 34293

Sun Coast Commodore Club, c/o 7034 Mayfield Drive, Port Richey, FL 34668

Lake/Sumter C.U.G., P.O. Box 490416, Leesburg, FL 34748

Hawaii

Commodore Hawaii User's Group, c/o M.N. Daniels, 46-329 Kumoo Loop, Kaneohe, HI 96744-3532

Illinois

S.W.R.A.P. User's Group, PO Box 342, Bedford Park, IL 60499-0342

Fox Valley 64 User's Group, PO Box 28, North Aurora, IL 60542

Sandwich Computer User Group, PO Box 23, Sandwich, IL 60548-0023

Blooming-Normal CUG, PO Box 1058, Bloomington, IL 61702-1058

Champaign-Urbana C.U.G., 2010 W. William, Champaign, IL 61821

East Side Computer Club, P.O. Box 276, Godfrey, IL 62035-0276

Indiana

Midwest Computer Users Group, P.O. Box 9311, Highland, IN 46322

Iowa

Commodore User's Group, Ames Region, PO Box 2302, Ames, IA 50010-2302

Commo-Hawk Commodore User's Group, PO Box 2724, Cedar Rapids, IA 52406-2724

Kentucky

Gold City Computer Users Group, P.O. Box 257, Fort Knox, KY, 40121

Louisville Users of Commodore of Kentucky, PO Box 9551, Louisville, KY 40209-0551

Louisiana

New Orleans Commodore Klub-64/128, P.O. Box 1997, Metairie, LA 70004-1997

Acadiana Commodore Computer Club, 416 Dale Street, Lafayette, LA 70501

Maryland

ABCUG, PO Box 179, Glen Burnie, MD 21060-0179

A.C.U.G., PO Box 3358, Annapolis, MD 21403

Massachusetts

Pioneer Valley Commodore Club, 6 Laurel Terrace, Westfield, MA 01085

Commodore Computer Club Of The Berkshires, 38 Walden Lane, Pittsfield, MA 01201

Boston Computer Society Commodore SIG, 101 First Ave., Suite 2, Waltham, MA 02154

Michigan

Michigan Commodore User's Group, 800 Lloyd, Madison Heights, MI 48071-1915

Down River Commodore Group, PO Box 1277, Southgate, MI, 48195

Computer Users of Lexington, P.O. Box 482, Lexington, MI 48450-0482

Saginaw Area C.U.G., P.O. Box 2393, Saginaw, MI 48605-2393

Lansing Area Commodore Club, PO Box 1065, E. Lansing, MI 48826
Muskegon Area C.U.G., P.O. Box 4496, Muskegon Hts., MI 49444

Missouri

CUGSL, P.O. Box 837, Bridgeton, MO, 63044
MDC/RCC - Commodore SIG, P.O. Box 34088, St. Louis, MO 63134
Commodore User's Group of Kansas City, PO Box 36034, Kansas City, MO 64111
Computers North Users Group, P.O. Box 34534, North Kansas City, MO 64116-0934

Nebraska

Greater Omaha C.U.G., P.O. Box 241155, Omaha, NE 68124-1155

New Jersey

Info 64 Users Group, c/o 186 Delmar Avenue, Glen Rock, NJ 07452
Rancocas Valley Users Group, 806 Windsor Drive, Cinnaminson, NJ 08077-3717
C.E.B.U.G., PO Box 314, East Brunswick, NJ 08816

New York

Bronx User's Group, PO Box 523, Bronx, NY 10475
Queens Commodore User's Group, P.O. Box 129, Queens, NY 11417
Brentwood Commodore Computer Club, c/o Public Library, 2nd&4th St., Brentwood, NY 11711
Mohawk Valley C.U.G., P.O. Box 343, Tribes Hill, NY 12177
Tri-City Commodore User's Group, PO Box 12742, Albany, NY 12212
Hudson Valley Commodore Club, c/o 620 Plainfield St., Kingston, NY 12401
Northern NY Commodore Home Users Group, c/o 6 Garden St., Pottsdam, NY 13662

Ohio

Central Ohio C.U.G., P.O. Box 28229, Columbus, OH 43228-0229
Commodore Club of Central Ohio, PO Box 292392, Columbus, OH 43229
Commodore Computer Club of Toledo, PO Box 13011, Toledo, OH 43613
Ashtabula County Commodore User's Group, c/o 1034 Michigan Ave., Ashtabula, OH 44004
Basic Bits Commodore Group, PO Box 81886, Cleveland, OH 44181-0886
Erie Bay C.U.G., P.O. Box 1461, Sandusky, OH 44870
Shelby C.U.G., P.O. Box 512, Shelby, OH 44875
Cincinnati Commodore Computer Club, 5575 Pleasant Hill Rd., Milford, OH 45150

Oklahoma

Commodore User's Group of Lawton, PO Box 3392, Lawton, OK 73502
Commodore Users of Bartlesville, 1920 Santa Fe, Bartlesville, OK 74003
Tulsa Area Commodore User's Group, PO Box 52473, Tulsa, OK 74152-0473

Oregon

Lane County Commodore User's Group, PO Box 11316, Eugene, OR 97440
Coos Computer Club, 2175 Everett, North Bend, OR 97459
Commodore User's Association, PO Box 84, Medford, OR 97501

Pennsylvania

Pittsburgh Commodore Group, PO Box 16126, Pittsburgh, PA 15242
Harrisburg Area Computer Club, 721 S. 29th St., Harrisburg, PA 17111
Philadelphia Area Computer Society, c/o LaSalle University, Philadelphia, PA 19141
Main Line Commodore User's Group, 1046 General Allen Ln., West Chester, PA 19382
Lehigh Valley C.U.G., 931 Lawrence Drive, Emmaus, PA 18049
Scranton Commodore User's Group, PO Box 244, Scranton, PA 18501

South Carolina

River Rats User Group, P.O. Box 1036, Bath, SC 29816-6610

South Dakota

Sioux Empire Commodore Club, 1932 S. Menlo Ave., Sioux Falls, SD 57105-2717

Tennessee

Memphis Commodore User Club, PO Box 34095, Memphis, TN 38134

Texas

North Dallas C.U.G., c/o 1522 Bitter Creek, Garland, TX 75040
Metroplex Commodore Comp. Grp., P.O. Box 813, Bedford, TX 76095
Commodore Houston User's Group, PO Box 441252, Houston, TX 77244-1252
Commodore Users of San Antonio Texas, PO Box 380732, San Antonio, TX 78280

Utah

Mountain Computer Society, c/o 3898 Cheryl St., Salt Lake City, UT 84119

Vermont

Champlain Valley Commodore User's Group, 6 Mayfair St., S. Burlington, VT 05043

Virginia

Washington Area Commodore User's Group, 7728 Viceroy St., Springfield, VA 22151
Fredericksburg Commodore Club, 6803 Teal Court, Spotsylvania, VA 22553
Peninsula Commodore User's Group, c/o W.L. Philips, P.O. Box 11293, Newport News, VA 23601-9293

Washington

University of Washington CCUG, P.O. Box 25878, Seattle, WA 98125
Commodore Users Of Puget Sound, P.O. Box 1806, Silverdale, WA 98383-1806
Tri-City Commodore Computer Club, P.O. Box 224, Richland, WA 99352

West Virginia

Commodore Home User's Group, 81 Lynwood Ave., Wheeling, WV 26003

Wyoming

Cheyenne Assoc. of Computer Enthusiasts, P.O. Box 1733, Cheyenne, WY 82003-1733

Canada

Ottawa Home Computer Club, 1743 Caminiti Crescent, Orleans, Ontario, Canada, K4A-1M2
Hamilton Commodore Users Group, Upper James P.O. Box 20202, Hamilton, Ontario, Canada L9C-7M5
Calgary Commodore User Group, c/o 427 5th Ave., SE, High River, AB, Canada, T1V 1H9
Commodore Users of Edmonton, 9550-83 Street, Edmonton, Alberta, Canada, T6C-3A1

England

ICPUG, c/o Tim Amot, 17 Colne Drive, Didcot, Oxon OX11 7JZ, England
geoClub, 55 High Bank Road, Droylsden, Manchester M35 6FS, England

Germany

GEOS User Club, Xantener Str. 40, D-46286 Dorsten, Germany

New Zealand

Kapiti Commodore Users' Group, 23 Weggery Dr., Waikanae, New Zealand

Mail Groups

Meeting 64/128 Users Through the Mail, Route 7, Box 7614, Palestine, TX 75801

CMD • HARDWARE • ORDERS: 1-800-638-3263 • SOFTWARE • CMD

HD Series SCSI Hard Disk Drives

HD-40, 42 MB (Limited Supply)	\$329.00
HD-100, 170 MB (Special Edition)	\$450.00
HD-200, 270 MB (Special Edition)	\$495.00
HD-500, 540 MB (Special Edition)	\$575.00
HD-1000, 1 GB (Special Edition)	\$895.00

FD Series 3.5" Floppy Disk Drives

FD-2000 (800K and 1.6 MB)	\$179.95
FD-4000 (800K, 1.6 MB and 3.2 MB)	\$249.95
FD Real-Time-Clock Option/Kit	\$20.00/\$29.00
Box of 10, High Density Disks (1.6MB)	\$14.95
Box of 10, Enhanced Density Disks (3.2 MB)	\$29.00

JiffyDOS

(Specify computer serial number and drive model)

JiffyDOS C64/SX-64 System	\$49.95
JiffyDOS C-128/128-D System	\$59.95
Additional Drive ROM's	\$24.95

Miscellaneous Hardware

80-column Monitors (Refurb)	CALL
Aprotek 3-Way User Port Expander	\$30.00
Aprotek User Port Extension Cable	\$19.00
C-64/64-C Computers (Refurb, w/JD)	\$89.00
C-64, C-64C Power Supply (Repairable)	\$39.00
C-128 Power Supply (Repairable)	\$49.00
Cannon BJ-2000x Bubble Jet Printer	\$289.00
Cannon BJC-4000 Color Bubble Jet Printer	\$399.00
Commodore 1541 Disk Drives (NEW, w/JD)	\$119.00
Commodore 1541 Disk Drives (Refurb, w/JD)	\$75.00
Commodore 1541-II Disk Drive (Refurb, w/JD)	\$109.00
Commodore 1802 40-column Monitor (Refurb)	\$139.00
CMD EX2+1 3-Port Cartridge Port Expander	\$39.95
CMD EX3 3-Port Cartridge Port Expander	\$34.95
CMD Gamepad/Joystick Controller	\$24.95
CMD GeoCable II Print Cable 8M/15ft	\$29.00/\$34.00
CMD SmartMouse (1351 Compatible Mouse)	\$49.95
CMD SmartTrack (1351 Compatible Trackball)	\$69.95
Monitor Cables	CALL
Mouse Pad	\$2.95
MV-350 Printer Interface (OK/8K Buffer)	\$49.00/\$60.00
Samsung SP-0912 9-pin Epson-comp. Printer	\$139.00
Samsung SP-2412 24-pin Epson-comp. Printer	\$179.00
Samsung SP-2417 24-pin Color Printer	\$279.00

Utilities

Big Blue Reader V4.10 (SOGWAP)	\$39.00
Buddy 64/128 Assembler	\$39.00
CMD Utilities	\$24.95
JiffyMON-64 (ML Monitor)	\$19.95
The Compression Kit '94 (Mad Man)	\$39.00

GEOS

Collette Utilities (Handy Geos Utilities)	\$19.95
Desk Pack Plus	\$29.00
Dweezis Greatest Hits (NewTools2 Stamp Label 128)	\$30.00
FONTPACK Plus	\$25.00
gateWay 64 or 128 (Specify Version)	\$29.95
geoBASIC	\$20.00
geoCalc 64/128	\$40.00/\$45.00
geoChart	\$29.00
geoFile 64/128	\$40.00/\$45.00
geoMakeBoot (Makes Bootable copies)	\$12.95
geoProgrammer	\$45.00
geoPublish	\$40.00
GEOS 64 v2.0	\$44.00
GEOS 128 v2.0	\$49.00
geoSHELL V2.2 (CLI for GEOS)	\$24.95
International FONTPACK	\$25.00
Perfect Print LQ for GEOS (Laser-like output)	\$49.95
RUN GEOS Companion	\$20.00
RUN GEOS Power Pak I or II (Specify)	\$20.00

Books

Anatomy of the 1541	\$12.00
Basic Compiler Design for the C-64	\$12.00
C-64 Science & Engineering	\$12.00
C128 Computer Aided Design	\$12.00
C128 BASIC Training Guide	\$12.00
Cassette Book for C-64 and Vic 20	\$12.00
Commodore 64 Tricks and Tips	\$12.00
GEOS Programmers Reference Guide	\$35.00
Graphics Book for the C-64	\$12.00
Hitchhikers Guide to GEOS	\$35.00
Ideas for Use on Your C-64	\$12.00
Printer Book for the C64	\$12.00
Mapping the C64	\$12.00
Simple Internet	\$16.95
Superbase - The Book	\$15.00

Scanning & Video

Handyscanner	\$249.00
Pagefox	\$139.00

RAMLink Power-Backed RAM Disk

RAMLink Base Model (OMB, No RAMCard)	\$149.00
RAMLink w/1 MB RAMCard (Limited Time)	\$199.00
RAMLink w/4 MB RAMCard (Limited Time)	\$339.00
RAMCard RTC Option/Kit	\$10.00/\$19.00
RAMLink Battery Back-up (Optional)	\$24.95
Parallel Cable (RAMLink to HD)	\$14.95

MIDI & Sound

Digimaster	\$34.95
SID Symphony Stereo Cartridge	\$44.95
Sonus 64 Sequencer, MIDI Interface, Cables	\$99.00
Sonus 128 Sequencer, MIDI Interface, Cables	\$99.00

Languages & Compilers

BASIC 64 Compiler (Abacus)	\$17.00
BASIC 128 Compiler (Abacus)	\$25.00
Blitz! 64 Compiler (Skyles)	\$30.00
Blitz! 128 Compiler (Skyles)	\$30.00
Buddy 64/128 Assembler	\$39.00
Cobol 64 (Abacus)	\$17.00
Fortran 64 (Abacus)	\$17.00
Pascal 64 (Abacus)	\$17.00
Power C 64 (Spinnaker)	\$14.00

Productivity

Cadpak 64 (Abacus)	\$22.00
Cadpak 128 (Abacus)	\$25.00
Chartpak 64 (Abacus)	\$17.00
Chartpak 128 (Abacus)	\$25.00
I Paint v1.5 (128, 80-col, 64K VDC) (Living Proof)	\$39.00
I Port v1.54 (128, 80-col, 64K VDC) (Living Proof)	\$29.00
Outrageous Pages (Batteries Included)	\$19.00
PaperClip 3	\$35.00
Personal Portfolio Manager (Abacus)	\$16.00
Pocket Writer 2 (64) (Digital Sol.)	\$65.00
Pocket Writer 3 (64 or 128) (Digital Sol.)	\$70.00
Pocket Planner 2 or Pocket Filer 2 (Digital Sol.)	\$35.00
PowerPlan 64 (Abacus)	\$16.00
RUN Productivity Pak I, II, or III (Specify)	\$15.00
RUN Super Starter Pak 1541 or 1581	\$20.00
RUN Works	\$20.00
SEC Check Register 128	\$29.00
SuperScript 64 (Precision)	\$15.00
SuperScript 128 (Precision)	\$20.00
Superbase 64 Version 3.01 (Precision)	\$35.00
Superbase 128 Version 3.01 (Precision)	\$35.00
SwiftCalc 64 (Timeworks)	\$16.00
Tax Perfect 64 (Free '94 Upgrade)	\$69.00
Tax Perfect 128 (Free '94 Upgrade)	\$79.00
TWS 64 w/Speller (Busy Bee)	\$29.00
TWS 128 w/Speller (Busy Bee)	\$79.00
TWS Modules (HD/RL/Illustrator)	each \$5.00

Telecommunications

Aprotek MiniModem C-24 (C= ready, 2400 baud)	\$69.00
Aprotek MiniModem C (C= ready, 1200 baud)	\$50.00
Aprotek Modem adapter (C= to Ext. PC Modem)	\$20.00
BOCA 2400 Baud Modem	\$69.00
BOCA 2400 w/SwiftLink and Cable	\$99.00
BOCA 14.4K bps FaxModem	\$129.00
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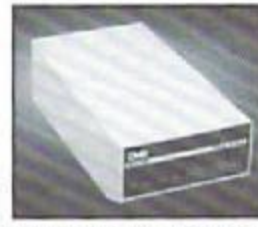
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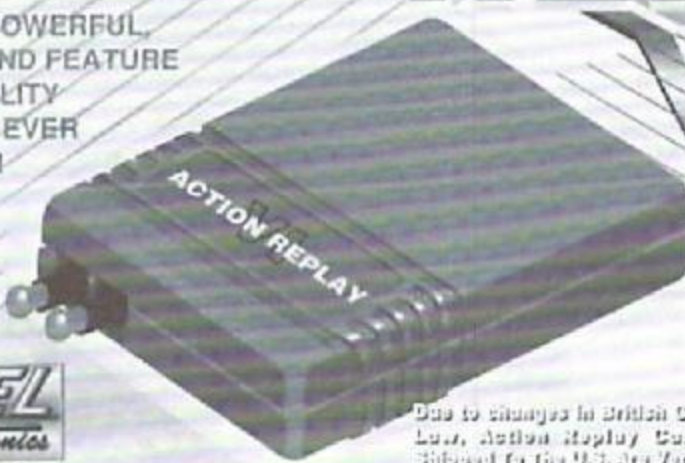
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A TALE OF TWO PRINTERS

by Ron Hackley

I had been considering purchase of an ink-jet printer for awhile. Jeff Jones at LOADSTAR aroused my interest in ink-jets with an article he wrote, and the LS newsletter was a shining example of what they could do. My ten year old Panasonic 9-pin printer is still working well, but I needed something faster and with higher quality text.

Peter Roffey of UWCUG loaned me his Canon BJ-200 Bubble Jet printer for a weekend. The first thing that impressed me was the text; it was excellent! Then I tried it with FGM to check out its graphics. Even more impressive—undoubtedly the best graphics output I'd ever seen from FGM. I was pretty much sold.

Then along came a very good printer article in *Commodore World* Issue 1. The article stated that ink-jet printers are slow (30-100 cps) and costly to run (8.9 cents/page for the BJ-200). Also that they were prone to smudging and "satellites" (a satellite is a small spot of ink that lands somewhere on the paper other than where it was supposed to, caused by the thermally created ink bubble not bursting evenly). More on these items later. The article said that the EPSON STYLUS-800 appeared to have less problems with satellites.

Next came an article in issue #35 of *TWIN CITIES* 64/128 (which itself was quite a surprise to receive). The author wrote extensively of his search for an ink jet printer. He did a lot more research than I cared to do, and finally settled on the EPSON STYLUS-800. The main reason he settled on the STYLUS-800 was that it uses a piezoelectric method to "shoot" the ink from the head to the paper. This method is said to produce fewer satellites than the thermal method used by most ink jet printers. Other reasons he settled on the STYLUS-800 included scalable fonts, and the capability of refilling the ink cartridge, which cuts the per-page cost considerably (not recommended by the manufacturer, of course).

The article swayed me towards the Epson STYLUS-800, which I ordered from Office Depot in Salem (OR). They sounded surprised that Roseburg even had electricity, not to mention computers, but they processed the order anyway (plastic works wonders!). The printer arrived by UPS the next day.

After some foreplay (enjoying every moment of a new computer toy) I set the printer up. Under my magnifying glass the text quality looked as

good as the Canon BJ-200. I didn't try out the scalable fonts; those take either WINDOWS or an advanced engineering degree to figure out how to access. Next I tried a graphics printout. My high was abruptly crashed; undoubtedly the WORST graphics printout I'd ever seen. Even worse than a weak-ribbioned MPS-801! I used double print with the STYLUS-800 to try and darken it up, but even then it was very light..

I tried every 8-pin emulation graphics capability the STYLUS-800 had, and the only thing that came even close to the Canon's (or even my old Panasonic's) quality was a twelve-pass NLQ driver that I'm working on for FGM. I did the same printout tests using an Epson 24-pin impact printer, and those results were also considerably better than the STYLUS-800.

Time to call Epson. After convincing the tech that I was not using WINDOWS, we got down to business. He did a printout using WINDOWS, but at the 8-pin emulation densities most common to Commodore programs. The results were as bad as I got. He finally admitted that Epson's 8-pin emulation left a lot to be desired. That's an understatement—it's useless.

The STYLUS-800's 80 dpi emulation is the worst of all its 8-pin emulations. The dots are not evenly spaced and this gives vertical banding in the printouts. The TC-64/128 article stated that the graphics output of the STYLUS-800 was extremely poor, but it also stated that this was the fault of the software drivers, not the printer. Not quite true. GEOS has drivers available that use the 24-pin mode, and 24-pin mode should give better output than eight-pin emulation. But... most graphics programs for the Commodore are going to want to use 8-pin emulation, which the STYLUS-800 is not good at.

Another important point; the STYLUS-800 doesn't have IBM PROPRINTER emulation, which means that the vertical density of all 8-pin emulations will be 60 dpi. This is worse than a

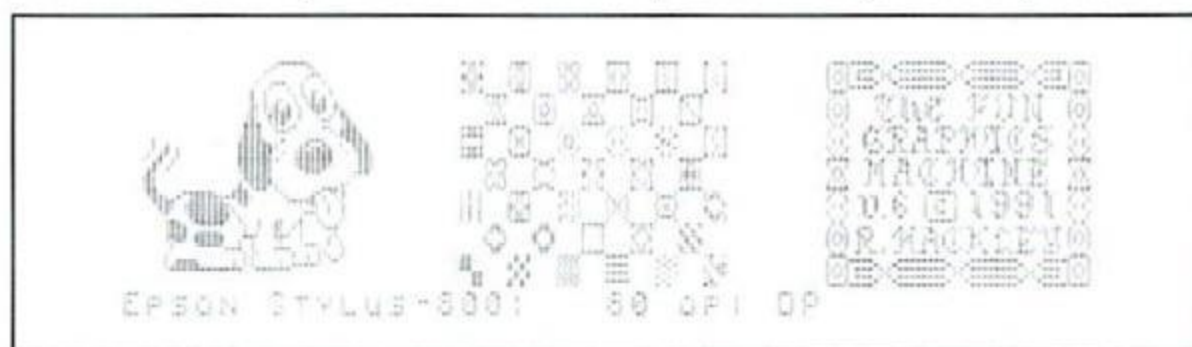
nine-pin printer, and causes printouts to be 17% taller. With printers that have IBM PROPRINTER emulation you can get 72 dpi vertical, which matches the vertical density of nine-pin printers.

I figured a company with Epson's reputation would've done better than they did, but maybe they weren't thinking of anyone actually using their 8-pin emulation (then why did they include it?). Anyway, thanks to Office Depot's excellent customer satisfaction guarantee, I packed the STYLUS-800 back up and they sent the Pony Express back down to pick it up.

Since I'd been impressed by the BJ-200, I contacted Canon to inquire about the differences between the BJ-200 and the newer BJ-200e. The tech there told me that they were essentially the same, but the BJ-200e had more fonts, enhanced gray scale capability, a reduction mode, and was bi-directional with graphics (which I highly doubted). The cost of the BJ-200e was about thirty dollars more than the BJ-200. I decided to go for the BJ-200e, thinking that the extra fonts would be nice to have. [Note: The BJ-200e has now been replaced by the BJ-200ex. -Ed.]

The rest of this article will deal with the Canon Bubble Jet Printer. First, the differences between the BJ-200 and the BJ-200e:

1. The BJ-200e does indeed come with more fonts... on disk and meant for use by WINDOWS or WORD PERFECT. If you aren't using the printer with WINDOWS or WP then you can forget about the extra fonts.
2. The BJ-200e lacks the "Super High Quality" mode that the BJ-200 has (also billed as "Quiet Mode" because it's a whole 2db quieter). I think the SHQ mode was overkill though; it REALLY lays the ink on thick.
3. The BJ-200e has logic seeking. This means the printhead won't go all the way to the left or



right side of the paper if it has nothing to print there, and is a big plus. The BJ-200 did not appear to have logic seeking.

4. The BJ-200e has 50% and 66% reduction modes, which are surprisingly handy. These are set from the panel, so no control codes to mess with.
5. As for bi-directional graphics printing, the manual says no, yet the box and customer service say yes, but no-one can tell me how to access it.

NOTE: The user manual for the BJ-200e has NO control codes; it expects you to hook the printer up to WINDOWS or WP and let their installation program do the work. Canon does provide a toll-free fax-back line where you can get an abbreviated summary of the control codes for free if you have a fax, but what you get is barely useful. A programmers reference manual is available for \$20.00 (plus \$8.00 s&h), and it's a must if you want to get the most out of the printer (to order call 1-800-671-1090). Insist on the one for the BJ-200e; it is NOT the same as the BJ-200.

The ink cartridge seems to last quite a while, and is easily refillable; pull a plastic plug out and squirt some ink in. V-Tech (1-215-822-2989) is one source for bubble jet ink; 4.5 oz. for \$7.90 (plus s&h). Each refill takes about 3/4 ounce, so you'll get at least five refills for about twelve dollars (V-Tech suggests nine refills; either way it's a lot cheaper than a new cartridge). I'm into my second refilling and the only problem was when I tried to get away with overfilling. All was fine for about two days, then all I got was either blank paper or huge smears of ink. The ink was puddling on the head so it couldn't be sprayed. I sucked out the excess with a syringe, rinsed the head in warm water, and all has been fine since.

You probably won't be able to refill the cartridge indefinitely; apparently the heating elements in the jets finally fail. V-Tech suggests about five refills. If you refill before the cartridge runs out of ink it will probably last longer; the ink seems to provide a cooling effect for the heating elements. When you replace the cartridge you are

actually replacing the printhead as well, hence if "inferior ink" should clog the printhead, no real loss or harm to the printer. Since the printhead is the most likely thing to go bad, I like the idea of it being easily and rather cheaply replaceable.

The price of the ink cartridge determines the per-page cost of using the printer (yes, plus paper). The manual says the ink cartridge lasts 400-500 full pages (700,000 characters) in High Quality (HQ) mode, and twice as many pages in High Speed (HS) mode. HS mode is "draft" mode, and output in that mode is quite acceptable. The list price for the cartridge is \$27.50, so a worst-case scenario of 400 pages would run 6.9 cents/page. By refilling the cartridge the cost drops to a half-cent per page (worst case). If you factor in having to replace the cartridge every five refills then the cost goes up to about two cents per page (again, worst case). One very nice point is that the print quality will remain fairly consistent, unlike a ribbon.

As for being slow, the BJ-200e is rated at 248 cps in HS mode (10 cpi), and 173/cps in HQ mode. That's lightning-fast compared to my Panasonic 9-pin. The HQ mode is nine times faster than my Panasonic's NLQ mode, and there's no comparison in quality. However, when enhancements are encountered (i.e.: outline, shadow, double height, etc.) the printer slows considerably.

Smudging and satellites: I've experienced no problems with either, although the ink is prone to smudging if you get it wet. Even quick swipes with a highlighter usually don't smudge the ink. As for the horrible satellites, I've printed a few thousand pages of text and graphics and have yet to spot any extraneous ink.

Banding appears to be non-existent. Banding refers to those streaks you see across a page with an impact printer, between each pass of the printhead. Particularly bad with a weak ribbon. Additionally, you don't see the individual dots in solid areas; the BJ-200e does an excellent job of filling them in. It does this by increasing the size of the dots as the density gets lower. This is an outstanding feature, and Canon is to be commended for not forgetting about those of us who need 8-pin emulation for graphics.

The printer has two basic modes, BJ-10 (IBM PROPRINTER), and EPSON LQ. The manual states that the BJ-10 mode gives the fullest range of features. This is only partly true. The BJ-10 mode has the fewest built-in features (i.e.:

fewer fonts, very few text enhancements), but it does allow more direct control by mega-programs in mega-computers. This mode allows directly accessing 48 of the printer's 64 jets (the BJ-200e is a 64 "pin" printer!).

In BJ-10 mode, IBM PROPRINTER with AGM (off) is available. This allows true 72 dpi vertical with 8-pin emulation for graphics, although it has fewer densities available (60, 120, 240). If you need 80 dpi, have your program send triple width and print at 240 dpi. True 24-pin output is available for programs that support it, although the BJ-10's 24-pin output offers no advantages over the EPSON LQ mode, and uses uncommon codes.

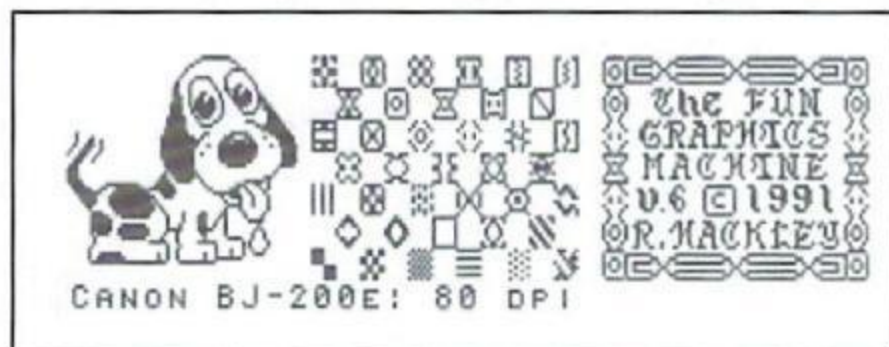
The EPSON/LQ mode definitely has more built-in features. For graphics output each mode has its advantages. The EPSON mode gives the widest range of densities for 8-pin emulation (60, 80, 90, 120, 240), although vertical density is only 60 dpi, same as most 24-pin printers in 8-pin emulation.

The control codes seem to be quite compatible with most Commodore text and graphics programs. Many additional features are available such as eight different typefaces, double height and width, and all can be done in OUTLINE, SHADOW, or BOTH TOGETHER. Also, pitches of 5, 6, 7.5, 10, 12, 15, 17, and 20 are available. The paper handling is excellent (sheet feed only), and the printer has a very small footprint. The DIP switches are easily accessible, not that you'll need to change them a lot. With the printer macros available in TWS-128 you can go nuts with this printer.

Minuses? The biggest annoyance is not having a knob to physically adjust the paper with. When the printer loads the paper it advances it a small amount, so you can't print at the very top. The advance is .12" in BJ mode and .33" in LQ mode (to keep Epson compatibility!). Also, you can't print real close to the bottom; the paper will be ejected and the next sheet loaded. When I have to work real close to the top or bottom I use 14" paper, then trim it down.

For those who need negative linefeed, the printer doesn't seem to have it (Canon says the mechanism is incapable of negative linefeeds, although I've watched it do them on its own).

In spite of the above, I'm very happy with this printer. Although it works great with FGM, you can bet that additional features will be added to FGM because of this printer. This printer will make output from any Commodore graphics program look far better than it would on any impact printer. It will even improve emulated 7-pin CBM output, if you must.



COMMODORE TRIVIA

by Jim Brain

These trivia questions are my gift to the Commodore Community at large; while other parts of this magazine may not be reproduced without the consent of Creative Micro Designs, Inc., these questions are public domain. I ask only that the article remains intact and unchanged, and that my information appears somewhere so users

can contact me. These questions form a contest that I run on the Internet, so you may feel free to contact me for all the relevant information. If you do use them, I always welcome a postcard detailing where they were used. If you have a question, please send it (with answer) as well. Enjoy!

Jim Brain (Internet: brain@mail.msen.com)
Brain Innovations, Inc.
2306B Hartland Road
Hartland, MI 48353

COMMODORE TRIVIA #6 QUESTIONS

- \$050 The Commodore 1551 Disk Drive is a parallel device. How did it connect to the Commodore Plus/4 and C16?
- \$051 How many could you attach?
- \$052 What were the addresses they used? (Not device numbers)
- \$053 What is the maximum number of sound octaves the VIC-20 sound generator can reach?
- \$054 Who wrote the reference guide that was distributed with almost every PET computer sold?
- \$055 The box that the C64 comes in has some propaganda on the side describing the unit. In the specifications section, it claims how many sprites can be on screen at one time?
- \$056 The Commodore Plus/4 computer contained the first integrated software package to be placed in a personal computer. What was the name of the software package?
- \$057 What popular computer software did the software package parody?
- \$058 One familiar Commodore portable computer was called the SX-64. What did SX really stand for?
- \$059 Who (what person) invented the Sound Interface Device (SID) chip?
- \$05A The ill-fated UltiMax (later called the MAX Machine) contained a number of Commodore 64 features. However, it did not share the 64's feature of 64KB RAM. How much RAM did the MAX have?
- \$05B What famous person was featured in U.S. television advertising for the VIC-20?
- \$05C What company designed the first VICModem?
- \$05D Everyone has seen or heard of BYTE Magazine. Known for technical articles in the 80's, and coverage of PC products in the 90's, BYTE was founded by Wayne Green. What Commodore computer magazine did Wayne Green later publish?
- \$05E (Three part question) What are the official names of the colors used on the VIC-20:
a) case?
b) regular typewriter keys?
c) function keys?
- \$05F Commodore is set up as a _____ chartered company. Name the missing country.

COMMODORE TRIVIA #5 ANSWERS

- \$040 Son Of God With All Power. They also market the Bible on diskettes.
- \$041 The 8280 has version 3.0. Many have not ever seen this IEEE-488 compatible drive used on some PETs. It has the same DOS version that is in the D90XX hard drives, and could read 250kB and 500kB IBM formatted disks, as well as some CP/M formats. Note that although this version number is used on the 1570/71 disk drives, the code is different.
- \$042 Some early versions of the Commodore 64 were housed in VIC-20 color cases, so off-white is the correct answer.
- \$043 Well, you cannot do so with the CPU directly, since it resolves these locations into internal addresses. However, the VIC II can see these addresses as external memory. So, just make one spritex with the first bit in the sprite set, and move it over the first two bytes, pretending they are part of a bitmap. By checking the sprite-to-background collision register, you can tell if the bit in the byte is set. Email me for a more complete description.
- \$044 It seems the 6510 generates a valid R/W signal any time it does an internal read or write. This is to be expected, since the 6510 internal registers were grafted onto a 6502 core processor. However, the address lines are also valid during any internal read or write, since failure to do so may write the data on the data bus to some invalid address. The data on the bus, however, comes not from the CPU, but from residual effects of the data last read or written by the VIC chip. Thus, by programming the VIC chip to read data from some known location, and by placing relevant data in that location, a write to location \$00 or \$01 will place the data from that last read VIC location into \$00 or \$01. This is usually accomplished by placing the data to be written out into location \$3fff, which the VIC fetches during the time the raster is being displayed. By triggering a routine when the raster hits the bottom border, you can copy location \$3fff to \$00 or \$01.
- \$045 This is the sound made by sending square out of the 6522 IC on some Commodore computers. It is called 'CB2', since that is the name of the pin on the 6522 that outputs the waveform. I won't go into a complete description, except to say that most models of the PET had the capability, and most PET owners used it as the ONLY sound source, since the PETs did not have a sound chip. Although the VIC did have some sound capabilities, by that time Commodore had realized its widespread use and included some information on it in the Commodore VIC-20 Programmer's Reference Guide. For more info, reach for your nearest VIC PRG and look at page 232.
- \$046 "Herbie". Jim Butterfield supplied me with this one.
- \$047 Jack Tramiel decreed that Commodore had a surplus of 1K chips, so he didn't care how much memory it had, as long as the designers used 1K SRAMs.

- \$048 ADSR stands for Attack, Decay, Sustain, and Release. These are the four values specified to define a SID waveform envelope.
- \$049 a) 170. (Yep, this was prior to 0!)
b) 100. (The PET 64 uses this value to adjust the startup logo accordingly.)
- \$04A John Feagan. He had intended it to provide upward compatibility for future computer systems. Unfortunately, the kernel was modified enough with each new computer system, that the idea of compatibility never really surfaced. Still, it was a nice try.
- \$04B There are two answers to this question. At the time, the VIC had no name and was called the MicroPET or No Name Computer. Jack Tramiel wanted to show some prototypes of the VIC at the 1980 Consumer Electronics Show (CES). The funny thing is, he got not one prototype, but TWO. Bob Yannes, working against time, had hacked together a minimal working prototype using spare PET/CBM parts. Another prototype, brought to the show by Bill Seiler and John Feagans, had been put together after some preliminary discussions with Yannes.
- \$04C Trick Question. The two 1525 printers I have show that the 1525 printhead has but one pin. The seven dots are created by a revolving 7-sided star-wheel for the platen, which presses the paper against the printhead in the seven different dot locations.
- \$04D PET means "FART" there.
- \$04E A 6520. It is appropriately called a PIA (Peripheral Interface Adapter).
- \$04F Jim Butterfield supplied me with this one. As you know, the first Commodore computers used the IEEE bus to connect to peripherals such as disk and printer. I understand that these were available only from one source: Belden cables. A couple of years into Commodore's computer career, Belden went out of stock on such cables (military contract? who knows?). In any case, Commodore were in quite a fix: they made computers and disk drives, but couldn't hook 'em together! So Tramiel issued the order: "On our next computer, get off that bus. Make it a cable anyone can manufacture". And so, starting with the VIC-20 the serial bus was born. It was intended to be just as fast as the IEEE-488 it replaced. And it would have been, except for one small glitch. But that is another trivia question.

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SOFTWARE IN REVIEW



Two Cool Tools for TAMING YOUR TAXES

Death and taxes. Those are the two unavoidable, inevitable, and particularly nasty aspects of life that we try like anything to avoid. I have always made it my personal policy not to get overly involved in either one.

Of course, my personal policy doesn't mean squat when April comes around.

You know, we could add another item to that list. Around this time of year, another inevitable thing is that slew of articles in computer magazines about tax programs. There are several very good reasons for this, the most important being that magazine editors love to tie into some aspect of what's actually going on in the world at large; it indicates that their magazine is on the ball and up to the minute and all that. It also indicates that the editor is in fact aware of where he is in the year and that he is, therefore, caught up and on schedule. As a result, Christmas time brings Christmas computer articles ("Twelve Neato Christmas gifts for the Twelve Days

of Christmas!"), September brings educational articles ("Take Your Commodore To School! Here's How!"), and April brings, yes indeed, articles about tax programs.

Now I have written Christmas articles and Valentine's Day articles and Back-To-School articles. But I never thought I would ever pull the Tax Time assignment. I am, you see, financially-impaired. My wife will gladly attest to this. I may as well try to write about subatomic particles or counted cross-stitch. Apparently, the editor of this magazine, in trying to look "caught up and on top of things," missed the brutally obvious fact that I am a tax moron. We may both be in trouble.

But actually, I don't know if he really made all that bad of a choice for this assignment. After all, I suspect that quite a few of you would have to admit to being financially-challenged as well. Be that as it may, you will soon be asked to figure out exactly how much of your hard-earned money Uncle Sam gets to keep. Like me, you are sure that so

matter how careful you try to be and no matter how many cans of Mountain Dew you drink, you will either accidentally steal gobs of money and end up in jail when they audit you, or miss all the really good deductions and give some bunch of IRS goons a hearty laugh of triumph as they look over your return.

Death and taxes. Two of a kind and both nasty.

Maybe there's another reason why computer magazines publish articles about tax programs. The personal computer *seems* like it would really be helpful when it comes to taxes. It *seems* like it should be able to, well, figure things out for you. Maybe you even bought your computer initially with the vague idea that it would be "good for doing my finances on." So when April comes around, you dust off all those hopes and dreams and read computer magazines, looking for the answer.

So, here it is, this year's proof that Commodore World is right in there and looking good, helping regular

people with their computer needs in a timely fashion. I have written about two tax programs which just might help you survive this most unpleasant chore. I don't write about them from the point of view of a tax expert, but from the point of view of just some guy with April 15 looming closer by the minute. If one of these programs can help you out, great. And if along the way you finally realize your dream of "putting that computer to productive use," well, that's a bonus.

TaxPerfect 64 and 128

Financial Services Marketing Corporation, 500 North Dallas Bank Tower, 12900 Preston Road, Dallas TX 75230; orders: 1-800-525-5611. Also available from CMD: \$69 (64 version), \$79 (128 version).

TaxPerfect is a serious package for serious people. Of course, the closer it gets to April 15, the more serious I get about this sort of thing, so that's actually saying something good. The manual is very complete and written

in no-nonsense fashion—no-nonsense to the point of being stuffy at times. Neither the program nor the manual is designed to make tax time *fun*. They do give the impression, though, that they know what they're talking about, and I suppose I'll trade witty repartee for the assurance that TaxPerfect won't rip me off.

What this program is designed for is to give you solid tools to fill out pretty much all the forms you will need for doing your taxes. The program presents you with each line from each form, in order, which you fill out with the required information. Essentially, that's all any tax program does for you, with the added bonuses of not having to enter the same information twice (you don't have to type your name over and over onto every form, for example), or having to do any math. TaxPerfect lets you jump to any form you might need, whenever you think you need it; the values calculated then fill in automatically on the 1040. This process works very smoothly. As you move through it, you'll find the forms you need waiting for you along the way. (The 128 version includes extra forms, but both cover the ones you're most likely to need.)

TaxPerfect goes out of its way to help you trudge through all this. While detailed help is not included, such as descriptions of just what the heck some of those blanks are asking for, basic tables and lists of codes are printed in the manual. As you work, you can refer to this along with the more complete instructions which your 1040 provides. It's really a good idea, though, to gather and write down all your information before you start, so all you have to do at the computer is enter the data. To make this easier, TaxPerfect will print out "input sheets," worksheets where you can jot down your information ahead of time. You can even "turn off" those blanks which the computer will calculate for you later anyway, so all your input sheets ask for is the stuff you actually do have to find out for yourself. This is a very helpful feature.

TaxPerfect has a lot of other helpful features. There is, for example, a built-in calculator in any line which might require it. As you navigate through forms, TaxPerfect will try to match your moves to the next logical form and even the next logical section of that form. Another nice feature is that you can use TaxPerfect to work on more than one person's tax returns, which means that if you really get good at this you can do it for money. The 128 version of the program will even remember your information as an official preparer and slap it on the bottom of each 1040 you prepare. (I see a new career ahead of me, once the editor of this magazine discovers how I've been talking about him in the introduction to this article and fires me.)

One of the best features is called Datacheck. When you activate this (using one of the function keys, which are all put to excellent use in this program), it scans your forms for any possible discrepancies or potential trouble spots. Datacheck warned me, for example, when I had entered a particularly large value for child care deductions. This kind of double-checking makes this program more than just a fancy calculator with a few forms in its head. TaxPerfect is a powerful tool to help you through one of life's big hassles. And when you're ready to print out the final copy, you can slip your 1040 into your printer (there are some handy alignment tools included to help you ensure that things print in the right places) and watch the blanks fill up. If you'd rather, you can just print out the data and write it onto your form yourself.

Tax Master

Master Software; \$32.00; 6 Hillery Court, Randallstown, MD 21133-4306; (410) 922-2962.

Tax Master doesn't give you quite as many frills as TaxPerfect. On the other hand, it costs half as much. The manual is a scant fourteen pages long (where the TaxPerfect manual

is bound in a small 3-ring notebook and runs to 49 pages even before you hit the appendices!) You won't find quite as many forms supported with Tax Master, either, although it does cover the needs of just about any regular user.

On the other hand, Tax Master will do a bang-up job of helping you do your taxes. Its main menu is nicely and intuitively designed, listing all the forms in the order you will most likely want to fill them out. As you work along, the data you enter and the calculations of the program will be available for the following forms. You don't have to fill out the forms in any particular order, of course, but it makes sense to do it in the order they suggest. The data from each form can then be saved to disk where it will be available for the next form you work on. This doesn't happen automatically, like it does with TaxPerfect, but the process is simple and easy to do. The manual, while granted not as exhaustive as TaxPerfect's, is clear and concise, taking you through the necessary steps very smoothly. You do have to be careful to follow those instructions, however, so no data is lost.

Tax Master has its share of nifty features. The calculator is a full-fledged desk accessory, popping up when you call for it. Besides the usual adding and subtracting, this calculator includes a memory function and a pseudo-paper tape. Of course, it's no problem to exit the calculator carrying with you the calculations, ready to be plugged into your forms. You can use the Tax Master program to prepare tax forms for more than one person, too. You simply save each person's data using a different set of initials and code numbers.

There is no way to print directly into your IRS forms with Tax Master. Instead, the program prints out your data for you to copy over by hand. But hey, that's the easy part; by the time you get to this point, Tax Master will have done most of the hard stuff for you already.

Both Tax Master and Tax Perfect are excellent programs. They will each make a lot less frustrating that tedious job of wading through tax forms and figuring out what to write on them. Both programs provide you with the forms you will most likely need, and both print out your data ready to enter into your official IRS forms. No matter which one you choose, you will be glad you turned over a large part of the drudgery to your Commodore.

For the extra money, TaxPerfect includes more forms and quite a few more features. The whole process is somewhat more integrated. The function keys are put to excellent use in TaxPerfect, from jumping quickly around a form to overriding some of the automatic calculations. The manual is much more exhaustive. A supporting depreciation calculation program is also included. TaxPerfect will print directly onto your forms. The 128 version works in 80 columns.

Tax Master costs a lot less and therefore, as you might expect, doesn't have all the features of TaxPerfect. The manual, although small, is very well written and helpful. The program is easy to use and very efficient. The built-in calculator is particularly useful. While Tax Master doesn't let you print directly onto your forms, it does provide you with all that you need to quickly and correctly fill out the forms yourself. There is only a 64 version available, but it will cheerfully run on a 128 in 64 mode.

I guess that's the bottom line, then. There are two great programs available, ready to take you kicking and screaming up to midnight on the 15th of April. But hey, it doesn't even have to be that bad! Go ahead. Prove to your spouse that your Commodore is really worth the space it takes up, that you can do more than just blast alien spaceships with it. Pop open a Mountain Dew and conquer a few tax forms.

— Steve Vander Ark



GAMES

MINI VIEWS



Mean Streets

Broderbund

Available from SSI

Mean Streets is a mystery lover's delight which challenges players to solve the Linsky/Golden Gate case. Conquering this case requires logic, intelligence, precision, and a tough-guy attitude.

Mean Streets places the player in the shoes of Private Investigator, Tex Murphy. Tex has been hired by the sultry Sylvia Linsky to investigate the death of her father. Eight months prior Mr. Linsky's death, he requested a leave of absence from his professorship at the University in order to work on an independent consulting contract. He refused to disclose the employer to anyone, even his daughter. His demise resulted from a plunge off the Golden Gate Bridge. Due to facts obtained from a witness, the San Francisco Police Department ruled his death a suicide. The police were unable to gather any evidence to indicate foul play was involved.

However, Ms. Linsky is convinced her father would never jump from a bridge. He had a fear of water resulting from a nearly fatal swimming accident. Sylvia is sure

her father was murdered and is willing to spend her life savings of \$10,000 to prove it.

When the game opens, you'll find yourself inside a Lotus Speeder, a 21st century "flying car". The speeder is used to travel along the west coast of California. It can be driven manually or with the aid of an Auto Pilot. You may prefer to use the Auto Pilot for awhile until you get used to the controls. Manually flying the speeder isn't very difficult thanks to the in-depth directions contained in the manual. Each location you'll want to visit has its own Navigation Code. Simply enter the Navigation Code into the Navigation Computer and you'll be on your way.

Once you land in your destination, you'll want to search everything that can possibly be searched and thoroughly question each person you encounter. The manual provides quite a few hints to lead you in the right direction.

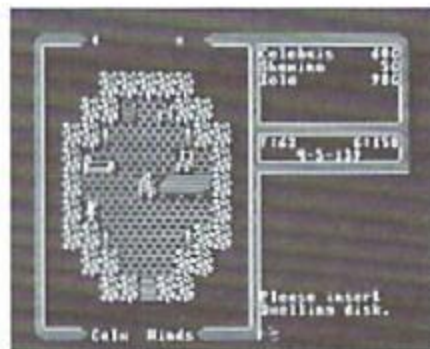
Game play is pretty addicting. There are even a few toys to play with inside the speeder such as a video phone and fax machine. The video phone is used to keep in touch with your secretary Vanessa and your favorite informant, Lee Chin. Keep a paper and pencil by your side for jotting down any clues you find along the way or use the Detective Information Charts provided with the game.

A large portion of Mean Streets consists of text. But the graphics and sound you find on your travels are nicely presented. The characters

look as if they are digitized along with some of the sound effects.

Now, I have to be honest, I'm not much of a detective game player, but once I sat down and started playing this game it was very hard to quit. Mean Streets is definitely a futuristic version of "The Streets of San Francisco". And if you're wondering who killed Carl Linsky, there's only one way to find out: play the game—you'll certainly have fun in the process!

- Sherry Freedline



Questron II

Origin Systems, Inc.

Available from SSI

Questron II continues the Questron role-playing adventure with 3-D graphics and a whole new host of monsters daring to be defeated.

In Questron I, your mission was to rescue the land from a Maniacal Magician and his Evil Book of Magic. Unfortunately, your successful completion of the mission did not result in the destruction of either of these sinister existences.

Questron II requests your help in destroying the Evil Book of Magic. However easy it may sound, it's a task requiring extraordinary skill,

power, and magic only you are capable of possessing.

The second adventure requires you to travel back in time before the creation of "The Book". By travelling back in time you can destroy the book before it's completed saving future civilizations from doom and corruption.

The action takes place in a place known as Landor where over 60 creatures await your arrival. Your adventure will require you to visit various towns, cathedrals, castles, tombs, and dungeons. The towns are places providing rest, gambling, goods to buy, stores to rob, and civilizations to enjoy. Various traps, rewards, and secrets important to completing the game can be found in the cathedrals. Castles are the center of Landor government. It is here that you'll meet some very important people possessing vital information and helpful items. Winding passages known as tombs are full of danger, treasures, and magic. The dungeons, the most dangerous of all the locations in Landor, are evil areas filled with the most powerful creatures. But, the more dangerous the creature, the greater the rewards. The rewards of defeating these powerful creatures are hidden throughout the dungeons in chests, vases, coffins, and other magical devices.

Questron's graphics are better than in Questron I because of the addition of the 3-D labyrinths in the dungeons. The game requires a joystick to select items from a menu and for movement. Documentation

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consists of The History, Tales, and Monsters of Questron II and a Questron II Command Card. The History of Questron contains vital background information which sets the scene for the game. It is here that you'll find detailed information regarding each of the monsters you'll inevitably confront.

The Command Card is a handy easy to use reference card explaining the available commands, combat, magic, attributes, and inventory involved in the game.

If you've played Questron I, your character can easily be transferred for use in Questron II. The game takes quite awhile to complete as do most Role-Playing games, so, of course, it can be saved to either the game disk or a blank disk.

Besides the 3-D graphics in the dungeons, this game is very similar to most of the other role-playing games on the market today. But, if you love the role-playing games, you will still enjoy completing Questron's second adventure game.

- Sherry Freedline



Stickybear Math

First Star Software
Available from SSI

Stickybear Math is a program I have been eyeing up for my daughter for quite some time now. Needless to say, I was very happy to review this program from Weekly Reader Family Software.

Stickybear Math is a fun yet educational program which drills children from 6 to 9 with math exercises containing addition and subtraction problems. By providing all new adventures at the end of each

level the program entices children to continue to practice. Stickybear features a variety of colorful cartoon-type characters complete with musical sound effects. This alone is enough to attract any child to the program.

There were a few items I needed to configure before I could hand the keyboard over to my daughter. At Stickybear's Welcome page parents may access one of two Parent Options by pressing a combination of keys. The fact that this can only be accessed by pressing two keys together is a great feature because it prevents little fingers from making unwanted adjustments to the difficulty of the program.

The first Parent Option allows the parent or teacher to configure the program for each child. The program can contain settings for up to 24 different participants. Configuration consists of replying to eight questions regarding a difficulty level from 1 to 20, how many tries will be allowed before the correct answer appears, whether the problems should consist of addition, subtraction, or both, missing addends, column addition, column subtraction, and multiple addends. At the end of these questions an opportunity is provided to review the answers and make changes if needed.

The second Parent Option allows the mentor to view a report card screen for the desired student. The report card indicates the number of questions answered in the last session, the number of right answers, the percentage rate, and the child's current skill level.

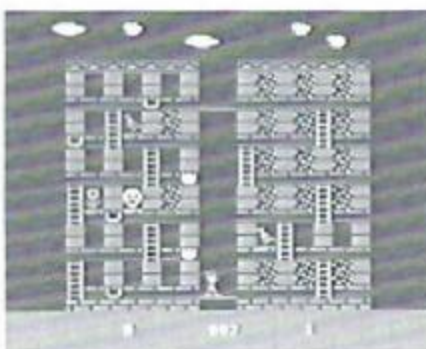
How much fun is the program? Well, after I finished configuring the software, my daughter promptly took over the computer chair and gave it a whirl. This is the same daughter that I have to tie down to a chair together to practice her weekly spelling words. We've had the program for approximately a month now and she's played 5 different

sessions in that time period. I can see soon I'll be adding settings for her friends. I often find them huddled around as my daughter proudly demonstrates her new game. She now knows how to load the program all by herself so she can play whenever the mood strikes her.

The only tough part about the program is the participant must remember to press the CONTROL and Z key when they are finished with their session. This must be done in order for the results to be saved to disk. But even this fact worried Mom more than it should have. I now feel quite comfortable allowing my daughter to play the game without my supervision. Periodically, I load the program to view her progress.

The best part of the program is even though it is an educational program, your child will consider it a game!

- Sherry Freedline



Memory Manor

Fisher Price
Available from SSI

Memory Manor is a fantastic first program for children four to eight years old. The memory skills built by this program are vital to the later development of reading, writing, and math skills.

The game is contained on a cartridge making it very simple to use. Just plug it into the proper slot, turn on the computer, and it's ready to go! This leaves very little time for your youngster to escape unlike disk programs which can take awhile to load. A joystick in port 2 is also required.

Memory Manor contains three

skill levels. As your child's skills and abilities increase these levels will provide him/her with an ongoing challenge.

The game screen consists of two adjacent buildings full of windows. Some of the windows contain prizes such as birds, cats, and flowers. Several other windows contain frowning faces. As the levels increase in difficulty more prizes and frowning faces will be distributed among the windows.

When the game begins, your child uses a helicopter to fill six buckets with window washing fluid. This task allows your child to plan a bit of a strategy by perhaps leaving buckets closest to the frowning faces empty as a marker. Once the buckets are filled, Wee Willie will be ready to go to work as a window washer. Pick him up in the helicopter and drop him off any place on one of the two buildings. As soon as he's deposited a sudden cloud burst appears and dirties all the windows.

The object of the game is to wash only the windows containing prizes and avoid those containing the frowning faces. This must be done before the window washing fluid runs out and before the sun sets for the day.

The bright and cheerful graphics are dazzle your child's eyes. The addition of musical sound effects easily inform your child of his or her's successes and failures. The only downfall to this game is the appearance of the game screen rarely changes. For this reason the game doesn't hold a child's attention for very long. Though my daughter doesn't play this game for long extended periods of time, she does play this game pretty often due to the fact it is so easy to start. This is one program she is old enough to start up and play all by herself. And as long as she continues to go back for more, that keeps me happy!

- Sherry Freedline

HARDWARE

IN REVIEW

CARTRIDGE PORT EXPANDERS: CMD'S EX3 & EX2+1



3-slot Cartridge Port Expander; \$34.95 (EX2+1 with two vertical and one horizontal; \$39.95); Creative Micro Designs, Inc., P.O. Box 646, East Longmeadow, MA 01028-0646; (800) 638-3263 (orders); (413) 525-0023 (info); (413) 525-0147 (fax).

There you are with your computer and a mess of cartridges, a RAM expansion unit, and possibly a SwiftLink or Hart RS-232 cartridge. You'd love to use the REU with the SwiftLink, but you can't fit two cartridges into one expansion port slot. What do you do? This has been a problem for C-64 and C-128 owners for years, so hardware called cartridge port expansion units were developed to remedy this. The latest offerings in cartridge port expanders are Creative Micro Designs' EX3 and EX2+1. While I had only the EX3 for this review, the only difference on the EX2+1 is orientation of the third port—horizontal on the EX2+1, as opposed to vertical on the EX3.

Having no case, one can immediately see the simplicity of the

EX3's design. The circuit board has a total of 17 components, including 3 expansion port connectors, 3 sets of DIP switches, a reset switch, and 2 sets of I/O jumpers. The plastic legs attached to the board makes the EX3 the correct height to plug right into a C-64 or 128. One end of the circuit board plugs into the expansion port of the C-64/128 computer, and cartridges are plugged into the 3 connectors on top of the EX3.

As I said, there's no case; I'm sure adding one would have increased the cost. Not to worry—a fully utilized EX3 is practically hidden from view underneath the cartridges plugged into it. From the looks of the cases on some other expanders, not having one looks better to me. One might even argue that the lack of a case makes it easier to vacuum up the cheesy curls that inevitably fall down into cases—but none of us eat while computing, do we?

I'm not sure it's worth quoting the exact time it took to install the EX3—my watch simply doesn't have enough precision. With your computer off, unplug any cartridges, plug the EX3 in and plug the cartridge into the EX3 cartridge slot #1, which is nearest the computer. That's it. Turn the computer on and verify that nothing has changed. Your computer shouldn't notice any difference with the EX3 installed.

Now, the power of the EX3 comes from allowing multiple cartridges to share the expansion port. However, achieving this expansion

port utopia is a skill that will take time and some understanding of the Commodore expansion port. So, be prepared to try out some different configurations in your quest. CMD supplies a small pamphlet with the EX3 that describes the different switches and jumpers, but it doesn't go into great detail on how to set up the EX3, since there are hundreds of possibilities. I suggest finding each cartridge's manual, and dusting off a book that describes the Commodore expansion port pins.

On the EX3, each expansion port connector has a set of 8 DIP switches that control it. The switches are labeled as follows:

SWITCH	SIGNAL
1	+5V
2	+5V
3	GAME
4	EXROM
5	I/O1
6	I/O2
7	ROML
8	ROMH

When a switch is ON, it makes that pin active to the cartridge plugged into the connector. A switch in the OFF position makes the corresponding expansion port pin inactive.

In addition, the middle connector (connector #2) allows the user to flip the meaning of I/O1 and I/O2. This means that, when flipped, a cartridge designed to activate on I/O2 will activate on I/O1. Typical examples of

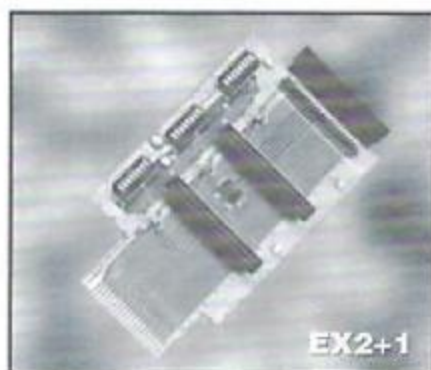
cartridges that utilize I/O1 or I/O2 are the SID Symphony, SwiftLink cartridge, and Commodore's RAM Expansion Units (REU's). However, in order for this flipping to work, your software must be able to work with the cartridge whether it is activated via I/O1 or I/O2.

There isn't much to dislike about the EX3. It tackles a simple job, and does it about as well as can be done. It won't fix all the problems, but it tries. After I put the unit through its paces with some of the cartridges and I/O units I had, I discovered the following:

1. The EX3 is a great addition for people who have multiple I/O cartridges, like and REU, a SwiftLink, a HART Cartridge, or a SID Symphony cartridge. Although the REU is expected to be at I/O2, cartridges like the SwiftLink can work at either I/O1 or I/O2, and most software supports this feature.

2. The choice is unclear for users who have multiple game or productivity cartridges. Most program cartridges cannot share the expansion port, so a lot of switch flipping will occur when selecting a new cartridge. With such small DIP switches, this can get tedious.

As a computer engineer, I took a good look at how the EX3 was constructed, since the EX3 would be



used often if purchased. From that standpoint, I noted the following:

1. The circuit design is clean. This is important when dealing with expansion port signals, as the Commodore expansion port wasn't really designed to drive multiple cartridges, and the EX3 stretches the limits here.
2. The switches are easily accessible. Even with an REU connected, they can be seen and flipped with ease.
3. The I/O1 and I/O2 are somewhat less accessible, as they are located

between the 1st and 2nd connectors. With some bigger cartridges, like the REU, connected, you will have to disconnect the cartridges before changing the jumpers. However, as this operation is done rarely, the problem isn't a big one.

4. The board has a very generous ground plane on the back. Aside from providing adequate ground components, this can also help keep signals strong and free of interference on the board.

As a unit, the EX3 is well constructed, from the components to the board itself. From a configuration standpoint, the EX3 gives the user control over pretty much all of the signals that can cause problems. Sure, there might be one or so more, but is it worth putting a switch on EVERY pin on the expansion port. I think not. From an aesthetic standpoint, I have no comment.

Being an engineer, I lean towards case-less stuff, since I am always tinkering. Others may not care so much for the appearance.

Since I was not able to examine the EX2+1, I can't comment on how the third port on it is attached. However, I got the impression that a right-angle header was used, which leaves some bare conductors on the top of the board. I'd recommend covering these with some electrical tape if you think anything conductive (metal) might fall on the board. A slightly better design would have been to extend the traces to the end of the board and place the connector directly over the traces. Apparently the EX2+1 was an afterthought—a modification of the EX3 made to support users who want (or need) one horizontal slot.

While I give the EX3 high marks, it isn't without some annoyances. Since all cartridges plugged in stand on end, big cartridges like the REU rise above the table significantly—

the EX2+1 is probably the route to go if this will create problems on your system. What if 3 slots aren't enough? It looks theoretically possible to piggy-back a second unit off of the EX2+1, though this might stretch the limitations of the cartridge port signals too far for some systems.

If you need an expansion unit for multiple I/O cartridges, like the REU and SwiftLink cartridges, and have 3 or fewer cartridges you need to use at once, either of these products will fit the bill. If you have limited space above your computer, the EX2+1 is probably the better choice for you. Just remember that it may take time to configure your system and there's no guarantee of success. I don't think Commodore ever intended the expansion port to be shared. Of course, there are a number of things we do that Commodore never intended.

- Jim Brain



JUST FOR THE FUN OF IT: CMD'S NEW GAMEPAD



Sega-style Game Controller; \$24.95; Creative Micro Designs, Inc., P.O. Box 646, East Longmeadow, MA 01028-0646; (800) 638-3263 (orders); (413) 525-0023 (info); (413) 525-0147 (fax).

There have been many times I've wished that I could use a Sega controller with my Commodore games. Well, guess what? My wish

has been granted! The geniuses at Creative Micro Designs have modified a Sega-style controller to work with our Commodore computers.

With CMD's new GamePad, old games feel new once again. To review this product, I dug into my collection of games. Even though I've played most of the games many times over, I was able to experience the

excitement of a new game with the added hopes of being able to beat my all-time high scores.

The black GamePad contains a directional pad on the left and six fire buttons on the right. In the center of the GamePad are two non-operational buttons. Also, only two of the six fire-buttons are operational. Provided with the GamePad is a small knob which easily fits into the center of the directional pad in order to simulate a joystick. I felt the GamePad was easier to use with the knob attached but, after an extended gaming session, my thumb did get a bit sore. The operational fire-buttons are the center fire-buttons marked Turbo and B. These are the best choices for the working buttons because you'll find your fingers naturally rest on these buttons anyway. The GamePad cord measures approximately 7 1/2 feet and easily plugs into either of the joystick ports.

One word of caution: Even though the GamePad resembles the actual Sega controller it should not be used with a Sega system. Modifications have been made to the controller to make it work with our Commodore computers. Using the controller with a Sega system could damage your system.

Now for the most important question of all... How does it work? Well after a couple of weeks of use with over 15 different games, I feel like I have a whole new game system. Of course there will always be some games that just plain feel better with a joystick. I didn't run into any games that would not work with the GamePad. In fact, in most of the games I played, it was a lot easier to maneuver with the GamePad. My controller of choice is now definitely CMD's new GamePad. Thanks CMD!!!

- Sherry Freedline



Graphic Interpretation

by Steve Vander Ark



GET THE MOST OUT OF GEOWRITE WITH A LITTLE FINE TUNING

It's always kind of fun to sit and think about what my GEOS column will be about. There are, after all, so many possibilities. Writing a column about GEOS means that I can pretty much write about anything I want, since at some level GEOS pretty much covers it all. You want to talk desktop publishing? GEOS does that better than anyone. Business applications? GEOS has them. Computer artwork? You can use GEOS programs to create works of art or make use of someone else's work. If programming is your bag, GEOS offers opportunities for both advanced and beginner programming projects, in machine code or BASIC. No programs for the Commodore make such good use of equipment, from the venerable dotmatrix printer to the latest high-capacity RAM devices. GEOS does it all.

Let's be honest, though. When I say that about "GEOS," I'm not talking about just the software package you order from CMD that says "GEOS 64" or "GEOS 128" on it. Those packages are wonderful—a file manager, a word processor, a paint program, and a bunch of great accessories, all designed to work together using that incredible GEOS operating system—but they don't do everything. You might say that the basic GEOS package gives you the potential for all the rest of those great things. You do have to spend some more money, though.

It's not just a matter of spending a little more money, either. There are some wonderful add-on packages for the GEOS system, most of which you will definitely want to get, but even with those you'll find here and there that you just need something else. Maybe you want to print out your documents with much higher quality. Maybe you really wanted to be able to use a particular type of graphic. Maybe you just wanted to find a



way to do what you're already doing with a bit more finesse and speed. That's where shareware comes into the picture.

To do it all, then you need the basic GEOS software, an add-on package or two, maybe some third-party products, and then just the right shareware programs to fine tune the whole thing. The great thing about the GEOS system is that all those extras and options are available. The downside, I'm afraid, is that it's pretty much up to you to figure out what things you need and where to get them. That can be a very daunting task, and even if you have access to the best on-line help on GENie or a user group full of experts, it's still hard to pull all those opinions and suggestions together.

That's where I come in. No, I'm not the ultimate GEOS expert. I know people who understand the inner workings of the system far better than I do. I know people who, when they have a need for a particular utility or function in GEOS, simply write the code and create it themselves. But my claim to fame is that I've spent the last eight or

nine years using GEOS, working with it, finding out how to do the things I needed to get done, downloading GEOS files, and basically doing a lot of the legwork you would have to do otherwise. That's why I get to write this column. And here's where that pays off for you.

This issue, I'm going to tackle the most often-used GEOS application, geoWrite. I'll talk about how it works, building on some of the comments in my GEOS articles that appeared in *Commodore World* Issue 5. I'll talk about some of the add-on programs you might want to consider. Hopefully, this column will give you a clear idea of how you can make this word processor work for you, how you can improve where necessary, and how you can make geoWrite work well with other GEOS programs. That's a lot to cover, so let's get started.

Basic geoWrite

GeoWrite is a word processor. What that means is that you use it to collect characters—letters, numbers, spaces, or command characters that you can't see—in a particular order that makes sense to you. When you have collected them (and rearranged or changed them if necessary until they are just right) the word processor lets you send them somewhere else, usually to a printer or to a disk. That collection of characters in a particular order is called a word processor file or document, and it might be anything from a note you jotted down but never intend to keep to a doctoral thesis. GeoWrite itself is a particular kind of word processor, called WYSIWYG. As I mentioned in my previous GEOS articles, WYSIWYG stands for "What You See Is What You Get" and it means that when you use geoWrite you see on the screen exactly what you would see

printed out on paper. In effect, when you are using geoWrite you are looking at a section of some electronic sheet of paper where your characters are being placed in neat rows and in all sorts of interesting patterns and styles.

GeoWrite uses graphics to create the image you will see on the screen and, if you print the file, on paper. That's why geoWrite can use so many different fonts and styles and also why it can use clip art directly, right on the screen. A graphic word processor is very powerful; you can really interact with your text on an intuitive level. That sounds kind of weird, but think about it: you are actually placing things on the screen exactly the way you will see them placed on the final page. If a heading is too small to be visible, you can see it and change it on the spot. You can change fonts to make your text more readable or fit the space better. Now that may seem obvious to you; how else would you do it? But before the advent of programs like GEOS for the Commodore and Windows for the IBM PC, word processors only showed you the text itself. How it looked on the page only became visible when you actually printed it out. If you wanted some style like bold face or to have your text centered, you had to enter a cryptic code that actually appeared on the screen right there in the middle of your words. There are some excellent word processors for the Commodore that work that way, SpeedScript being one of the best examples.

Using graphics, however, has some drawbacks. Having the computer draw all that on the screen as you chug along takes time, and a graphic word processor is going to be slower than one that uses only the computer's built-in characters. You'll find that geoWrite occasionally misses some of your keystrokes, especially if the window you are working in has to shift to show you a new section of the page. Changing from one page to another can be even more time consuming, since geoWrite has to calculate and verify all the text on the previous pages to make sure it's caught up to you, then it has to start a new storage section on the disk drive to hold the next page of information. You can beat most of this time lag by using a RAM device, however. The movement of the window in which you work can be minimized by narrowing the margins of the page to keep the whole width on the screen at once (essential in geoWrite 64) and using a smaller font so the window doesn't fill up as fast and have to move.

GeoWrite Tune-Up

If you use a smaller font, however, you may find yourself with the unpleasant task of trying to change the font or the point size of an entire geoWrite document. It isn't easy. GeoWrite

simply doesn't have commands that will affect an entire document. The closest you will find is "select page," which lets you highlight and work on all the text on a page. This sounds pretty useful; why not just select each page in turn and make the change to the new font? The trouble is that when you change the text on one page, you might very well move some text to or from an adjacent page. If you make your characters smaller, for example, you will be able to fit some of the next page's text on the current page, and geoWrite will move it over. This new text on the page was not selected back when you chose "select page," however, so it still has the old font or size. If you go to that next page and make the change, the text that moved will never be caught and changed. What you have to do in that case is plod through your document, page by page, finding and correcting the bits of text that slipped through the cracks.

"IN ORDER TO FINE TUNE GEOWRITE AND BEAT ALL THESE LITTLE PROBLEMS, YOU NEED SHAREWARE."

This lack of "global commands" that affect an entire document is one of the flaws in the geoWrite word processor. There are others: you can't print out your text using the built-in font of your printer, for example, unless you give up all cool styles like underline or bold face; there is no word count feature; you can't send your text file to a disk as purely an ASCII text file, acceptable by nearly every word processor on any computer in the world. You can't go to Creative Micro Designs and buy some kind of GEOS package that fixes all those flaws, either. In order to fine tune geoWrite and beat all these little problems, you need shareware. You'll find, in the file libraries of on-line services such as GENie or CompuServe, utility programs for geoWrite that nicely fix all these little flaws.

Let's look at our font changing problem. Wouldn't it be great to simply select a font and then have geoWrite go through its own file and

change the whole thing, character by character? That's just exactly what you can do with WrongIsWrite, a must-have utility written by Joe Buckley. WrongIsWrite will perform a number of different conversions of your word processor files, including a complete change of font or style in one pass. The font and style information WrongIsWrite uses must be saved first in a text scrap. WrongIsWrite will also convert your file into ASCII.

Everyone needs WrongIsWrite, but if you use GEOS 64 you will also need ToolKit. That's because in order to use geoWrite 64 for any serious writing, you'll need to reset the margins to keep the work window from jumping back and forth as you type. Changing the margins to full-page wide when you're done is the problem; you'll end up chasing bits and pieces of incorrectly-formatted text around your document for hours. WrongIsWrite doesn't include that option, but ToolKit does. Both use text scraps for their formatting information, but the process can be a little tricky, so read the documentation files. You can find these files on GENie. WrongIsWrite is file number 10140; for ToolKit you'll want the documentation, file number 14890, and then either the 40-column version, file number 10527, or the 80-column version, file number 12797.

Shareware programs also offer fixes for the other problems I listed above. Finding a word count of your geoWrite document is easy with Blue Pencil, GENie file number 13838. And if you want to print your geoWrite documents using the built-in styles and fonts of your printer, you'll want to use Text Print, an outstanding utility written by Terry Van Camp. Text Print is really several files, including several fonts which make the spacing on your computer screen match your printer's spacing, documentation, and a customizing program. Once you've set things up (and you need the printer's control codes to do this, by the way, so dig up that manual) you can choose Text Print from the desk accessory menu and unleash the power of your printer. The GENie file numbers for ToolKit are as follows: the program itself is file number 14109, the documentation file is number 14177, and the fonts are file number 14110.

So, have we exhausted the subject? No, of course not. There are plenty of ingenious utilities and add-on programs for geoWrite, from a text analysis program to a little converter to change geoPublish-formatted text files back into geoWrite. Maybe I'll do a part two of this column down the road. But next issue? Who knows? With all these possibilities, I could write about pretty much anything at all!



GEO PROGRAMIST

by Maurice Randall

REMEMBER 'INPUT FILENAME'?

Programs written nowadays are meant to be easy to use—at least they should be. Many older programs are still being used today, and many of them suffer from a common fault: lack of a file requestor. Surely, you have loaded up a program such as a word processor and then needed to load in a data file, and all the program can do is say, 'Input Filename:'. So, you try to remember the name of the document you wish to load into the word processor. To no avail, you shut down the computer and load in the directory and with a pencil and paper, you write down the exact name of the file you need and are sure to spell it correctly including the use of upper and lower case letters. You reload the word processor, and with the correct information in hand, you bring your document into memory for further editing.

This scenario may sound a little extreme and somewhat primitive, but it's all too common. Some programs will at least let you view the directory from within; this helps somewhat, but you still have to be on your toes, especially if the program doesn't provide a means of pausing the directory as your intended filename scrolled right on by.

More thoughtful programmers provide a means of displaying a directory and allow the user to select a filename right from the list of those displayed. This is definitely a much needed improvement. As time went on, more thought was put into this method. Let's say the user changes his mind and decides not to load in a file. The programmer then provided an escape route, a means of exiting back to the main program without loading in a file.

Early 64 users were blessed by being able to have a disk drive with which to store their data files on, instead of a datasette. Prices dropped and soon people had two or more drives at their disposal. Many programs only allowed access to one drive. The programmers then added the ability to select from a second or third drive. If someone could just foresee all of our needs in advance, there would be no such thing as evolution.

With the advent of GEOS, being able to select from a list of filenames is taken for granted. In other words, you better not use the old 'Input Filename:' in your GEOS application. Your program will most likely be considered trash before it is even looked at. Fortunately, the GEOS Kernal has a considerable number of file handling routines built right in, thus easing the workload for our own programming.

The Basics

A file requestor can be very simple with the 'Input Filename:' and a blinking cursor, or it can be very elaborate. Serious GEOS users want elaborate

programs, but as a programmer, you must try to make your programs elaborate, yet easy to use. If you can achieve this, you will gain considerable popularity.

A file requestor should be easy to use, yet perform as many functions as needed by the application in question. Generally, you would use a dialogue box for your file requestor, but you can also create your own custom requestor using other methods. For our purpose, we will use a dialogue box since it is the simplest method.

The file requestor will have a window in it with a scrolling list of filenames. This can be handled by a built-in function of GEOS. There should be a minimum number of icons for the user to select. One of these should be either an 'OPEN' icon or an 'OK' icon depending on the intent of the file selection. You must also provide a means of backing out. So, a 'CANCEL' icon would be most appropriate.

No More Drive Icon

You've all clicked on the 'DRIVE' icon a time or two. This is not a good icon to put in your file requestor. "Wait a minute!", you say. Yes, I have already stated that some means should be provided to allow the user to select a different drive, and I still say that. But we should no longer use a 'DRIVE' icon to do this with.

When GEOS first came out, it only supported two drives, 8 and 9, or in GEOS terms, A and B. The 'DRIVE' icon was nice. It would allow the user to toggle between the two drives. An application such as GeoWrite would then display the list of files from the other drive. In fact, geoWrite still uses this method. It toggles between drives A and B. So, now you are thinking that we only have to check to see what drives are online and if drive C is available, go ahead and toggle to that drive also. Sure, and that would work, but the user has to toggle to drive B before getting to C. Meanwhile, he has to wait for the files on drive B to be displayed before being allowed to get to C. What if he wants to get to D. And worse yet, what if he is looking at drive B and wants to go back to A? He's got to go through C and D first. He's getting mad before he even gets to use your program.

The Way It Should Be

Now that you understand the problem—and it is really a bad situation when the directory size is quite large—we will always use a different method. It is very simple to check to see which drives are connected and running on the system. Once this is learned, we would display a separate

icon for each drive. The user could then go straight to the drive he wishes to load a file from.

So, we have a dialogue box. In that dialogue box, we have a window, two icons to either continue or cancel the operation, and one to four icons for the drives. This will all fit quite nicely into a standard dialogue box.

Building A Dialogue Box

We need a subroutine in our application that can be called anytime a user chooses to access a file. Maybe the dialogue box for the file requestor comes up when the application is first started or maybe when the user makes a selection from a drop-down menu or an icon. In any case, our code would jump to the routine that handles the file requestor.

A dialogue box is described to the GEOS Kernal with a table containing various pieces of information. Example 1 illustrates the table that we need to use for this simple file requestor. I say simple because this does not yet have the drive icons in it. We will add those in the next issue. For now, we will merely provide a means of displaying a list of filenames and a way to back out with a CANCEL icon. Nothing will happen if a file is selected because we are not putting the OPEN icon in yet. All we want to do right now is get the thing on the screen to see if it works and then add to it afterwards. This is exactly how you would create any program. You do it in steps and test each step as you go.

In this table, the first .byte statement tells GEOS that we want to use a standard sized dialogue box in the standard screen position. This is identified by the constant DEF\$DB\$POS. It is or'ed with a value of 1, which means that we want to use a shadow under the box with the #1 pattern, which is a solid color. If the 1 was left out, then no shadow will be used.

The next .byte statement defines the use of the CANCEL icon. This is a system icon. GEOS will take care of displaying it for us, the picture is built right into the Kernal. We tell GEOS where we want to put it with the next two bytes. The first one is the x offset from the left of the dialogue box in bytes, which means 8 pixels at a time. In our case, we use the constant DB\$X\$2 which equals 17. This is where the left of the icon will be. The second one is the y offset from the top of the box, and this is DB\$Y\$2 which equals 72. This value is in pixels. This tells GEOS where the top of the icon should be. That ends the definition for the CANCEL icon.

Now the info for the window containing the list of filenames comes next. The constant DB\$GETFILES tells GEOS to display a list of filenames in a window within our box. The next

byte statement which indicates the distance from the left of the dialogue box to the left of the filename window is in pixels, instead of bytes. Then the position from the top of the box is next. The last .byte statement is simply a zero signifying the end of the table.

Let's look at the routine that will call up the dialogue box. We merely have to point r0 at the table and call DoDlgBox.

```
LoadW r0,#DBTable
jsr DoDlgBox
```

DoDlgBox is the routine built into the GEOS Kernal that handles this for us. Now, since our table defines that we wish to use a GetFiles window, we need to pass just a little more info to GEOS before calling DoDlgBox. We need to tell it the type of files to display. This is done by loading r7L with a filetype. Let's use a 7 here to indicate data files. A 17 byte buffer must be provided for GEOS to copy the selected filename to. The first sixteen bytes will hold the filename and the 17th byte will always be a null terminator. GEOS will also place a null byte at the end of the filename, even if it is less than sixteen characters. We can point r10 to a string that would represent a permanent name contained in the file header blocks. If so, only those files containing that permanent name will be displayed. In our case, let's just set r10 to zero, which means to ignore the permanent names.

```
LoadB r7L,#7
LoadW r5,#nameBuffer
LoadW r10,#0
LoadW r0,#DBTable
jsr DoDlgBox
```

```
nameBuffer:
.block 17
```

In this example, when the user clicks on the CANCEL icon, the dialogue box will close and execution will continue with whatever instruction follows the 'jsr DoDlgBox'. Our program could then take whatever action is needed. Perhaps the user clicked on a filename. If we were to include an OPEN icon in the table, the file would not be opened. That job is still left up to some more code that would have to be written. When the user clicks on an icon such as the CANCEL icon, the dialogue box closes and some info is returned to our program. A value will be placed into r0L indicating which icon was clicked on. In this case, we only have one icon. A CANCEL icon will return a value of 2 in r0L. If we had more than one icon, we could tell which one was clicked on by checking

the value in r0L. Then we would know what action to take.

Since we have provided a buffer for a filename, that buffer will now be loaded with a filename if the user clicked on one.

Put It To The Test

Enter this code that I have shown so far into a geoWrite file. After the 'jsr DoDlgBox' line, just put something like 'jmp EnterDesktop'. Be sure to type in the table from Example 1. Create a source file for the header block and then use geoAssembler to assemble both files. As shown in a previous article, be sure to .include geosSym and geosMac in your source code. Once assembled correctly, use geoLinker to link the .rel files into an application that you can load and test. You won't see much, but you should be presented with a dialogue box and a list of filenames from the current drive that your program was loaded from.

If you followed the articles from the last two issues, then you should be able to modify this little example to work in both 40 and 80 column mode, otherwise, I have shown it only for the 40 column screen. One thing that needs to be pointed out here, though, is that the doubling bits don't apply to everything within a dialogue box. Anything that is referenced in 8 pixel bytes such as the icons, can have the doubling bits applied. But the positioning of other things such as the file window and text strings are automatically placed twice as far as listed in the dialogue box table. This is because objects which can be positioned on any horizontal pixel can only be referenced by one byte within the DB or 0-255 pixels from the left of the DB.

Next issue, I'll show you how to add the drive icons. We will also do something simple with whatever file is clicked on.



Example 1

```
DBTable:
.byte DEF$DB$POS ) 1

.byte CANCEL
.byte DB$X$2
.byte DB$Y$2

.byte DB$GETFILES
.byte 4
.byte 4

.byte 0
```

BASIC INSTINCTS

by Gene Barker

SCREEN I/O TECHNIQUES: PART 1

In Commodore BASIC v2 we have the handy INPUT command. If we wanted to grab a string from the user (such as the user's name), we would use a line such as:

```
100 INPUT"NAME",NS
```

Or if we wanted to grab a number from the user (such as the user's age), we would use a line such as:

```
110 INPUT"AGE",A
```

When RUN, the INPUT statement will ask the user for the desired information and place the data into the variables NS and A. But there's one problem. What happens if the user accidentally presses a cursor down key or types a letter instead of a number? You may get a ?REDO FROM START or perhaps an ?EXTRA IGNORED error. What if you want the ability to stop the program by using the [RUN/STOP] key? The INPUT statement ignores it. Maybe there's a better way.

In this issue of BASIC Instincts we'll give you three subroutines which will help you input text and numbers in a more graceful and professional manner. Now your BASIC programs can be just as friendly as those high tech Machine Language ones. Onward...

Displaying The Cursor

We need a way to tell the user that our program expects input of some kind. BASIC's flashing cursor is a great way to accomplish this. To turn the cursor on and off, all we must do is:

```
POKE 204,0 (to turn the cursor ON)
```

```
POKE 204,1 (to turn the cursor OFF)
```

You will find that the first two subroutines, INPUT STRING (SUB) and INPUT INT STRING (SUB) use this method. Don't let the POKE statements confuse you. BASIC knows where the cursor is at all times. When we change the value at memory location 204 with the POKE statement, we are simply telling BASIC whether or not to display the cursor.

Intercepting Keys

All three of the subroutines in this column require the ability to intercept keys as they are typed. To accomplish this, we intercept keys one at a time with a statement like the following:

```
100 GET XX$:IF XX="" THEN 100
```

Each time the user presses a key, it is placed in the character buffer (the buffer can hold up to ten characters). We use the GET statement to pull these characters out of the buffer one at a time. In the above statement, we grab the character that is first in line with GET, and place it in the string variable XX\$. If there are no characters waiting in the buffer then the variable XX\$ will equal "". The double quotes indicate a null character (no character available). The IF statement makes sure that we have a valid character before moving on to the next line.

Formatted Integers

Have you ever noticed that BASIC prints a leading space in front of positive integers? BASIC always prints positive integers in this manner and aligns the integers to the left. Our third subroutine INPUT RANGED INT (SUB) allows the user to use the plus and minus keys to select the integer they wish to enter. To keep the output clean and professional, we use BASIC's string formatting statements STR\$, MID\$, and RIGHT\$. Let's take a closer look. Before we can manipulate a number, we must first convert it to a string. BASIC's STR\$ function makes this simple. Example:

A	STR\$(A)
5	" 5"
-100	"-100"
654321	"654321"

Notice how BASIC adds a leading space when converting positive integers to a string. To remove this leading space we can use the MID\$ function. Example:

A	MID(STR\$(A),2)
5	"5"
-100	"100"
654321	"654321"

The MID\$ function removes the leading space from any positive integer (A). Notice how the function strips the negative sign from -100. Now, how can we left align our integer (A) to five digits and pad the leading digits with zeros? This can be done through the strategic use of the RIGHT\$ function. Example:

A	RIGHT\$("0000"+MID(STR\$(A),2),5)
5	"00005"
-100	"00100"
654321	"54321"

Note how we lost the leading digit of 654321. When we use the RIGHT\$ function for padding, we should always be careful to provide for enough digits.

See if you can follow how the INPUT RANGED INT (SUB) subroutine uses this method.

The Subroutines

The type in program includes the three following subroutines:

- INPUT STRING (SUB) - Inputs a string from the user
- INPUT INT STRING (SUB) - Inputs a positive integer string from the user
- INPUT RANGED INT (SUB) - Inputs a positive integer from the user

At the top of the program is a sample call for each subroutine. The subroutines are written for readability, not speed. You will find that they are well documented and easy to read. You are free to use these subroutines in your own programs (commercial included).

Notes

As you type in this issue's program, take it one section at a time. Try to get a general idea of what the section is trying to accomplish. See if you can follow how the section is using its variables. If you see an unfamiliar BASIC statement, take a quick look at it in your BASIC manual. If you are still confused, move on to the next section; often times the next section helps explain the previous one. Above all, don't forget to BACKUP your work frequently.

Entering The Program

Before entering this issue's program, load and run the CHK-LIST utility (located elsewhere in this issue). CHK-LIST insures that you enter the program correctly the first time. Also, remember to SAVE the program before you attempt to RUN it. It never hurts to be safe.

INPUT1.BAS	
5000	100 REM-----
6DC2	105 REM COMMODORE WORLD MAGAZINE
C67C	110 REM BASIC INSTINCTS W/GENE BARKER
F7C2	115 REM SCREEN I/O TECHNIQUES PART I
0E6B	120 REM
1A27	125 REM (C)1995 CREATIVE MICRO DESIGNS
92AD	130 REM-----
1315	135 REM-
3047	140 REM INPUT STRING SUB EXAMPLE
C243	145 REM-
A6D3	150 PRINT"(CRSR DN)* INPUT STRING SUB EX AMPLE"
6606	152 PRINT"(2 SPACES)UPTO 10 CH'S"
5C54	154 PRINT"(2 SPACES){(BACK ARROW)} TO AB ORT"
C785	156 PRINT"(CRSR DN){2 SPACES}STRING:";
1433	158 XM=10:GOSUB 10000
0210	160 PRINT
D76D	162 IF XSS="" THEN 200
C366	164 PRINT"(CRSR DN){2 SPACES}YOU ENTERED : "XSS
C1CC	200 REM-
C975	205 REM INPUT INT STRING SUB EXAMPLE
DA6B	210 REM-
6AF2	215 PRINT"(CRSR DN)* INPUT INTEGER STRIN G SUB EXAMPLE"
66D7	220 PRINT"(2 SPACES)UPTO 4 DIGITS"
D53F	222 PRINT"(2 SPACES){(BACK ARROW)} TO AB

INPUT1.BAS (cont.)	
	ORT"
5AE8	224 PRINT"(CRSR DN){2 SPACES}INTEGER:";
F46D	226 XM=4:GOSUB 10200
C37D	228 PRINT
FB8F	230 IF XN<0 THEN 300
F5E0	235 PRINT"(CRSR DN){2 SPACES}YOU ENTERED : "XN
5291	300 REM-
6B8F	305 REM INPUT RANGED INT SUB EXAMPLE
4936	310 REM-
6841	315 PRINT"(CRSR DN)* INPUT RANGED INTEGE R SUB EXAMPLE"
9A6D	320 PRINT"(2 SPACES)VALID RANGE IS 8 TO 16"
4940	322 PRINT"(2 SPACES)DEFAULT INTEGER IS 1 2"
283F	324 PRINT"(2 SPACES)USE (+, -) TO CHANGE #"
FA79	326 PRINT"(2 SPACES)USE RETURN TO ENTER #"
5D4C	328 PRINT"(2 SPACES){(BACK ARROW)} TO AB ORT"
F2CC	330 PRINT"(CRSR DN){2 SPACES}INTEGER:";
87E0	332 XL=8:XH=16:XD=12:GOSUB 10400
F04C	334 PRINT
6E4E	336 IF XN<0 THEN 400
F088	338 PRINT"(CRSR DN){2 SPACES}YOU ENTERED : "XN
6263	400 :
C56C	999 END
548B	10000 REM-----
F5DB	10005 REM INPUT STRING (SUB)
EC33	10010 REM
E4EC	10015 REM GIVEN XM - MAX LENGTH OF STR
DB34	10020 REM RETURNS XSS - STRING
9860	10025 REM
B2ED	10030 REM NOTE: IF XSS="" THEN NO
FABE	10035 REM STRING WAS ENTERED
548B	10040 REM-----
C0EF	10045 XSS="":XL=0
D168	10050 POKE 204,0:REM TURN CURSOR ON
DF96	10055 GET XXS:IF XXS="" THEN 10055
4FE1	10060 : IF XXS<>"{(BACK ARROW)}" THEN 1007 0
8B69	10062 : XSS=""
E462	10064 : POKE 204,1:REM TURN CURSR OFF
ED48	10066 : RETURN
4F26	10070 : IF XXS<>CHR\$(13) THEN 10080
17AE	10072 : POKE 204,1
ED48	10074 : RETURN
5345	10080 : IF XXS<>CHR\$(20) THEN 10100
AB63	10082 : IF XL=0 THEN 10055
7709	10084 : PRINT XXS;
03EA	10086 : XL=XL-1
E03C	10088 : XSS=MID\$(XSS,1,XL)
F1F0	10090 : GOTO 10055
3F73	10100 : IF XL=XM THEN 10055
41E5	10102 : IF XXS<CHR\$(32) THEN 10055
4170	10104 : IF XXS<CHR\$(96) THEN 10110
E6D7	10106 : IF XXS<CHR\$(193) THEN 10055
1B21	10108 : IF XXS>CHR\$(218) THEN 10055
4059	10110 : PRINT XXS;
6FA6	10112 : XL=XL+1
1956	10114 : XSS=XSS+XXS
AE8D	10116 : GOTO 10055
378A	10200 REM-----
7B2D	10205 REM INPUT INT STRING (SUB)
B2FD	10210 REM
0CF1	10215 REM GIVEN XM - MAX NUM OF DIGITS
CBE7	10220 REM RETURNS XN,XSS - NUMBER
C6AE	10225 REM

INPUT1.BAS (cont.)

```

DDF1 10230 REM NOTE: IF XN<0 THEN NO NUMBER
4C68 10235 REM WAS ENTERED
243C 10240 REM-----
0997 10245 XSS="":XL=0:XM=-1
1F64 10250 POKE 204,0:REM TURN CURSOR ON
2FFD 10255 GET XX$:IF XX$="" THEN 10255
95B0 10260 : IF XX$<>"{BACK ARROW}" THEN 1027
0
A481 10262 : POKE 204,1:REM TURN CURSR OFF
73A5 10264 : RETURN
BF4D 10270 : IF XX$<>CHRS(13) THEN 10280
902F 10272 : IF XL=0 THEN 10276
3D64 10274 : XN=VAL(XSS)
50C6 10276 : POKE 204,1
8518 10278 : RETURN
A32E 10280 : IF XX$<>CHRS(20) THEN 10300
800E 10282 : IF XL=0 THEN 10255
2347 10284 : PRINT XSS;
579B 10286 : XL=XL+1
96F8 10288 : XSS=MID$(XSS,1,XL)
B335 10290 : GOTO 10255
FE91 10300 : IF XL=XM THEN 10255
4BC5 10302 : IF XX$<"0" OR XX$>"9" THEN 102
55
F3D3 10304 : PRINT XSS;
3BD7 10306 : XL=XL+1
0A2C 10308 : XSS=XSS+XX$
FAFC 10310 : GOTO 10255
243C 10400 REM-----
B6DD 10405 REM INPUT RANGED INT (SUB)
50A5 10410 REM
5C0B 10415 REM GIVEN
CF06 10420 REM
C772 10425 REM XL - LOW INTEGER
A4B0 10430 REM XH - HIGH INTEGER
D6D4 10435 REM XD - DEFAULT VAL
4D08 10440 REM
E326 10445 REM RETURNS XN,XSS - NUMBER
0E6B 10450 REM
ED61 10455 REM ALLOWS INPUT OF NUMBER
EB9A 10460 REM THROUGH THE USE OF THE (+,-)
EC0A 10465 REM AND RETURN KEYS
91C8 10470 REM
A384 10475 REM NOTE: IF XN<0 THEN NO NUMBER
6450 10480 REM WAS ENTERED
811B 10485 REM-----
C00D 10490 XN=-1:XM=LEN(STR$(XH))-1
8886 10492 X1$="":X2$=""
98D4 10494 FOR XI=1 TO XM
1973 10496 : X1$=X1$+"0"
2AD4 10498 : X2$=X2$+CHRS(157)
EFF1 10500 NEXT
A99C 10502 XSS=RIGHT$(X1$+MID$(STR$(XD),2),XM
)
EA2E 10504 PRINT XSS;X2$;
CFD2 10506 GET XX$: IF XX$="" THEN 10506
E905 10508 : IF XX$<>"{BACK ARROW}" THEN 1052
0
C0B8 10510 : RETURN
DE8B 10520 : IF XX$<>CHRS(13) THEN 10530
088F 10522 : XN=VAL(XSS)
F7C3 10524 : RETURN
C939 10530 : IF XX$<>"+" THEN 10540
29D9 10532 : IF VAL(XSS)=XH THEN XD=XL-1
67DF 10534 : XD=XD+1
E254 10536 : GOTO 10502
4F0D 10540 : IF XX$<>"-" THEN 10506
976F 10542 : IF VAL(XSS)=XL THEN XD=XH+1
47F7 10544 : XD=XD-1
F4E0 10546 : GOTO 10502

```

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How to Type In Program Listings Appearing in Commodore World

While *Commodore World* currently doesn't make it a habit of publishing type-in programs, a number of our columns do require entering sample routines. For this purpose, we have created our CHK-LIST utility for the Commodore 64 and 128. This utility uses a 16-bit CRC checksum method to verify that you have correctly entered each program line, and that each of the characters in the program lines are in the correct order.

You'll notice that program listings appear with a column of values to the left of the program lines. These values are the CHK-LIST values and are not to be entered as part of the program. A similar set of values are generated by the CHK-LIST utility to allow you to verify that everything has been entered correctly.

Enter the CHK-LIST program from BASIC. You can use either a C-64 or a C-128 computer. If you use a C-128, it can be in either 64 or 128 mode. Be sure to enter each line carefully to avoid mistakes—until you actually have CHK-LIST working, finding errors in program entry won't be easy. After you have finished entering the program, be sure to SAVE a copy to disk before you attempt to RUN it, just in case. If you aren't familiar with how to save a program to disk, you can use the following command:

SAVE"CHK-LIST",8

CHK-LIST	
A454	10 F=ABS(PEEK(65533)=255):M=49152:IF THE
	NM=4864
6E2F	12 C=0:PRINT"(CLR/HOME)WORKING";
E350	20 READD:IFD=-256THEN40
AD20	30 C=C+D:IFD<0ANDF=0THEN20
3316	31 IFD<0THEND=0-D:M=M-1
07F0	32 POKEM,D:M=M+1:PRINT". ";GOTO20
578A	40 PRINT:READCK:IFC<>CKTHENPRINT"ERROR I
	N DATA STATEMENTS!":END
0679	50 PRINT"DONE.":END
8D92	60 :
E7FE	49152 DATA 165,43,-45,133,251,165,44,-46
	,133,252
B2AE	49160 DATA 169,0,141,36,193,-20,169,147,
	32
CD50	49168 DATA 210,255,32,194,192,-19,160,0,
	140
C9CD	49176 DATA 37,193,-20,177,251,133,253,20
	8,3
2058	49184 DATA 238,37,193,-20,200,177,251,13
	3,254
EA9C	49192 DATA 208,3,238,37,193,-20,173,37,1
	93,-20
6C15	49200 DATA 201,2,208,1,96,200,177,251
E70E	49208 DATA 170,200,177,251,32,205,-50,18
	9,-142,169
6795	49216 DATA 6,133,211,-236,169,61,32,210,
	255
F80F	49224 DATA 169,32,32,210,255,160,2,177
9735	49232 DATA 251,32,213,192,-19,200,177,25
	1,32
0734	49240 DATA 213,192,-19,200,177,251,240,6
	,32
D99D	49248 DATA 213,192,-19,76,90,192,-19,173
	,191,192,-19
AC30	49256 DATA 32,167,192,-19,173,190,192,-1
	9,32,167

To use CHK-LIST, load it into your computer and type RUN. Make sure that any program you are currently working on is saved first, or start CHK-LIST before you begin typing in a new program. After you have CHK-LIST in memory and running, type NEW. You may now either load or begin typing the program you wish to have CHK-LIST check on. Whenever you want to check your program, type in the appropriate SYS command given below:

C-64 or C-128 in 64 mode: SYS49152

C-128 in 128 mode: SYS4864

Note that when typing in listings, some special characters will appear in braces. For example, {CLR/HOME} means that you should enter the Clear key, which is done by holding down the SHIFT key while you press the HOME key. Other times you may see a number ahead of the key name, such as {3 SPACES} or {5 CRSRL}. This means you should press the key indicated the number of times shown. Most special keys are easy to identify, since the text shown will generally match the text on the key. Exceptions are the space bar (SPACE), and cursor keys which include directions ({CRSR UP}, {CRSR DN}, {CRSR L} and {CRSR RT}). Be sure to use the correct key combinations for color keys, such as <CTRL><2> for {WHT}.

CHK-LIST (cont.)	
B343	49264 DATA 192,-19,169,13,32,210,255,165
	,253
DF3A	49272 DATA 133,251,165,254,133,252,238,3
	6
A6E2	49280 DATA 193,-20,173,36,193,-20,201,20
	,240,3
936E	49288 DATA 76,18,192,-19,162,0,189,1,193
	, -20
8C3A	49296 DATA 240,6,32,210,255,232,208,245,
	32
EB74	49304 DATA 228,255,201,13,208,249,32
6095	49312 DATA 228,255,208,251,76,8,192,-19,
	72
A001	49320 DATA 106,106,106,106,32,180,192,-1
	9,104
FAA2	49328 DATA 32,180,192,-19,96,41,15,170,1
	89
EBFD	49336 DATA 20,193,-20,32,210,255,96,0,0
E907	49344 DATA 0,0,169,0,141,190,192,-19,141
E8EA	49352 DATA 191,192,-19,169,33,141,192,19
	2,-19,169
A7D7	49360 DATA 16,141,193,192,-19,96,162,8,7
	2
6040	49368 DATA 41,127,77,191,192,-19,141,191
	,192,-19
D24B	49376 DATA 24,14,190,192,-19,46,191,192,
	-19,144
D52F	49384 DATA 18,173,192,192,-19,77,190,192
	, -19,141
DCA6	49392 DATA 190,192,-19,173,193,192,-19,7
	7,191,192,-19
6032	49400 DATA 141,191,192,-19,104,10,202,20
	8,215
37C5	49408 DATA 96,13,80,82,69,83,83,32
9A2A	49416 DATA 60,82,69,84,85,82,78,62
AC90	49424 DATA 13,13,13,0,48,49,50,51
FE71	49432 DATA 52,53,54,55,56,57,65,66
017E	49440 DATA 67,68,69,70,0,0,-256,37944

SCSI MAGIC

by Doug Cotton

REMOVABLE MEDIA: SYQUEST YOUR SYSTEM

As I sat down to write this issue's installment of SCSI Magic, it seemed reasonable to take a break from all the programming to look at something that would interest both programmers and users alike. So put aside your keyboard for a bit as we learn about removable media SCSI devices, and how they can be put to use on our Commodore 8-bit systems.

Device Types

Removable-media devices can fall under any of several SCSI device categories: direct-access read/write devices, sequential-access devices (tape), direct-access read-only devices (CD-ROM), and write once/read many (worm) devices are all commonly used schemes. Of these, the direct-access read/write devices are of the most interest to us, since these devices use the same command set as standard SCSI hard drives. This means that these devices can be added directly to a CMD HD system without any real need to adapt the HD-DOS.

When it comes to direct-access removables, there's yet a further breakdown; different technologies and mediums are employed by the various manufacturers to provide us with a wide variety of storage capacities. There are floppy drives, flopticals, rigid-disk cartridges and more. While I haven't had the opportunity to try all of these, most should be similar in many respects so far as how they operate under SCSI.

CMD Controller Requirements

While most of the direct-access removable devices can probably be used with a CMD HD system, the one device type that we can be sure will work well is the Syquest, a removable rigid-disk cartridge drive. Why the Syquest? That takes a little explaining...

The CMD HD system was designed primarily for use with hard drive mechanisms—devices which have a fixed size, and which are willing to report that size to you when asked properly. One of the things that the CMD "ADD DRIVE" utility

does when adding a new device to the system is to poll the device to see how big it is. This is necessary in order to maintain internal tables used by HD-DOS for creating and locating partitions quickly.

The Syquest drives respond to this polling in the same manner as a real hard drive would, so no special new utilities are required to add a Syquest drive to a CMD HD system.

Which Syquest?

Syquest makes a variety of drives in different sizes. For many years, these drives came in only 44 MB and 88 MB sizes, both in 5.25" cartridges. Early 88 MB Syquest drives couldn't read the 44 MB cartridges, but later models accepted both. Eventually, Syquest added a 200 MB cartridge and drive to top off their 5.25" line. This latter model can read and write all three of the 5.25" cartridge types.

Ever striving to improve, however, Syquest has also created two 3.5" drive models. The first of these to arrive was a 105 MB model; this was quickly followed by a 270 MB unit which is currently the highest capacity model Syquest manufactures. These drives are faster than the older and larger types, but any of these drives will offer equal or better performance than the old Seagate hard drive mechanisms originally used in the CMD HD drives.

Reliability

In the past, many have questioned the reliability of Syquest cartridges. In my own experience, I've found them to be very reliable on their own. I should note, however, that removing a Syquest cartridge at the wrong time can and will cause data loss. Used properly, though, the cartridges appear to be as reliable as most hard drives.

Adding a Syquest

There are some very simple steps to follow when adding a Syquest drive to an existing CMD HD system. But first, make sure you get everything

you need when you buy the unit. It should be an external drive with its own case and power supply; ask the vendor you buy from to include a terminator and a SCSI cable (DB-25 to Centronics 50-pin SCSI).

Before you attach the Syquest drive, use the HD-TOOLS program to allocate as much of your current HD as possible. When you finish this step, you should have less than 256 blocks available for partitioning.

Now hook up the drive to the HD using the SCSI cable, and place the terminator in the second SCSI port on the Syquest. Set the SCSI device number to anything but 0 or 7. Turn on your equipment, and place a cartridge in the Syquest. Now run LLFORMAT to format the cartridge (this will take a few minutes). Once the cartridge has been formatted, run ADD DRIVE to add the Syquest to your system.

At this point, you're all set to add some new partitions. This is a little tricky. First, create a 256-block FOREIGN partition, to act as a "bridge" between your hard drive mechanism and the Syquest. Now you can create whatever partitions you wish, but keep this important fact in mind: *Every cartridge you use will have the same partition arrangement, since the partition table is kept on the main hard drive—not on the cartridge.*

Whenever you get a new cartridge, you'll need to use LLFORMAT to low-level format it. Don't run ADD DRIVE again, though, since the drive has already been added. Don't try adding new partitions, either, unless you didn't use the full capacity when you created partitions for the initial cartridge. DO format each of the individual partitions you created for the previous cartridge, using the standard HD-DOS format command. Since you're using a new cartridge, these will appear to be unformatted until you do.



HARD TIPS

MONITOR CABLES FOR ALL OCCASIONS

by Mark Fellows

IMPORTANT

Projects presented in this column often require the use of special tools and a fair degree of manual dexterity. Besides the danger of physical injury, assembly errors could damage your equipment. In no event will Commodore World or Creative Micro Designs be liable for any direct, indirect or consequential damages resulting from the use or misuse of the information given in this article.

You may be aware that it's getting more and more difficult to find all the various video cables needed to connect the myriad of different C-64/128 compatible monitors. Being able to build your own video cables with readily available parts provides you with the assurance that you will be able to connect any Commodore-compatible monitor to your system—now or in the future. This is important because in today's marketplace for Commodore equipment you may have to take what you can find—and many times a used monitor will come without any cables.

Before we go any further, however, I do want to mention that CMD has recently begun manufacturing a complete line of C-64/128 compatible monitor cables. So, if you don't feel very adventurous or ambitious, you may opt to contact CMD to obtain a ready-made cable. But if you are like many Commodore users and enjoy the fun and challenge of a new project, read on!

Required Tools

- Soldering Iron and Solder
- Utility Knife
- Wire Strippers
- Volt/Ohm Meter with continuity buzzer recommended

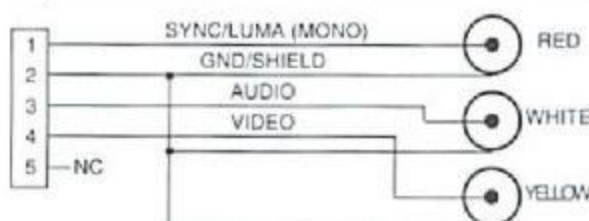
Building the Cables

First, pick out the proper cable for your application. Refer to the following paragraphs for help in making the right choice and for a list of the parts you will require. Before you begin, make

sure you have a clean uncluttered work area and all your tools and parts handy. Good Luck!

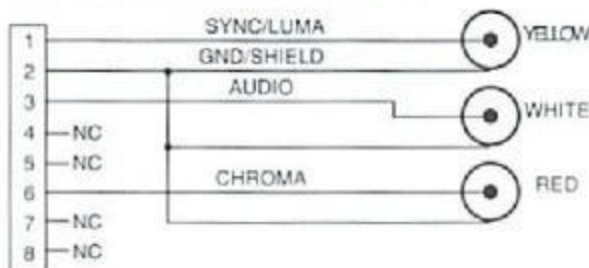
Composite Color/Monochrome Cable

This cable is needed for any C-64 that has a 5-pin video output jack, and can connect a composite color or monochrome monitor to any C-64/128. The parts you will need are a 5-pin DIN Plug (Radio Shack 274-003) and Stereo A/V cable (Radio Shack 15-1537). The latter is a patch cable, so you'll have to cut the connectors off one end.



Separate Luma/Chroma Color Cable (RCA)

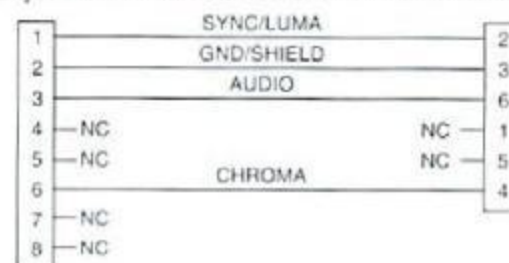
The separate Luma/Chroma color output capability of C-64's (and 128's) with 8-pin video jacks provides a clearer picture when coupled with a Monitor with matching RCA inputs (1702, 1802, 1902, 1084). To make this cable you will need the rare 262° 8-pin DIN Plug (ORA Electronics LXS82 or CMD DIN8-262) and Stereo A/V cable (Radio Shack 15-1537).



Separate Luma/Chroma Color Cable (8-pin DIN)

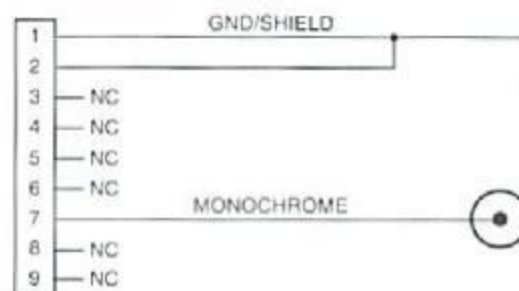
This cable will connect a C-64/128 with an 8-pin video jack to monitors that have separate Luma/Chroma inputs wired to a 6-pin DIN connector (1902A, Magnavox RGB, etc.) To make this one you will need the hard-to-find 262° 8-pin DIN Plug (ORA Electronics LXS82 or CMD DIN8-262), a length of 4-conductor shielded

computer hookup cable (Radio Shack 278-777) and a 6-pin DIN Plug (Radio Shack 274-020). Note: I think the cable comes in 30-ft lengths only, so don't be afraid to cut it down to size.



C-128 80-Column Monochrome Cable

To view the C-128's 80-column display on a composite monochrome monitor, you need this cable. It requires a DB-9M connector (Radio Shack 276-1537), DB-9 Hood (Radio Shack 276-1508), and a VCR A/V cable (Radio Shack 15-1535) with one of the ends cut off.

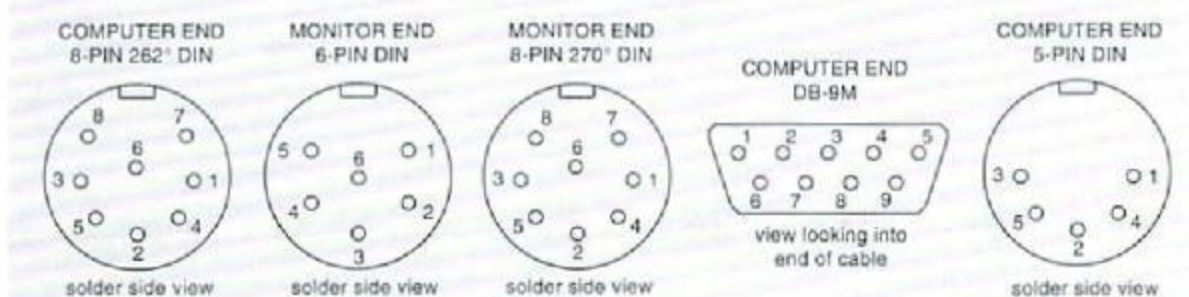
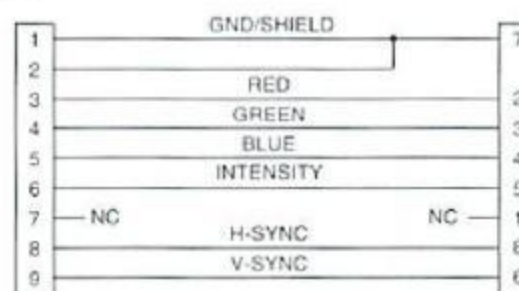


C-128 80-Column Color Cable (DB-9)

This one's easy. Buy it from CMD (RGBDB9-9) or Radio Shack (26-257).

C-128 80-Column Color Cable (8-pin DIN)

This one's not so easy. You will need a DB9M/DB9F CGA monitor cable (cut the female end off of Radio Shack 26-257) and an 8-pin DIN plug (Radio Shack 274-026). Important: Don't cut the wrong end off of the DB9 Cable! You need the male end (the one with the pins) to plug into your computer. And don't forget—before you can attach the 8-pin DIN connector, you're going to have to use your continuity tester to figure out which color wire connects to which pin on the remaining end.



Peripheral Vision

By Jim Butterfield



DISK COMMANDS AND THE WEDGE

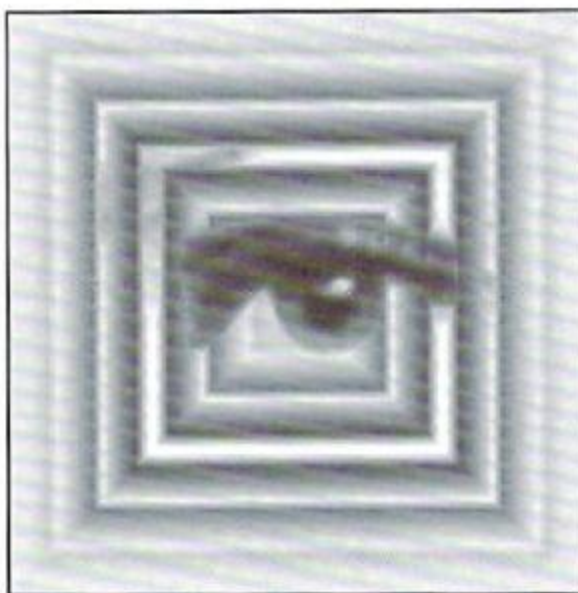
Your disk drive has a message for you. And it's waiting for you on channel 15 (secondary address 15, the command channel). The message is in English, but it also comes with a "code number" to make it easy for a program to check for possible problems.

If you have a Commodore 128, you can ask for the message by commanding `PRINT DS$` (`DS` stands for Disk Status), or you can just get the number with `PRINT DS`. If you have a Commodore 64, it's not quite as easy—unless you have a "wedge" program tucked away somewhere in memory. More on wedges in a moment.

There's a message waiting after virtually every disk activity. It might simply say "OK"; after a command to scratch files, the message might report how many files were removed from the disk. When there's an error, the disk light blinks and the message tells you what's wrong: perhaps there's trouble reading a file, or it can't write data because the disk is full or the write protect tab is in place.

To get such a message, you must have an open channel to the disk's secondary address 15, and you must ask for data over that path. Many programs start with `"OPEN 15,8,15"` to make the connection; they subsequently call `"INPUT#15,E$,E1,E2"` to get the status information. Eventually, there's a `"CLOSE 15"` to close the channel; the close must take place only after all other files have been closed.

But you can't use an `INPUT#` statement as a direct command; it works only within a program. So on the 128 you must type `PRINT DS$` to get



the data, and on the 64... you have a problem. But the problem can be solved by means of a little program called "the wedge".

Wedge Programs

The name, wedge, comes from two facts. First, the extra code has to be wedged (or squeezed) into the operating system. Secondly, the earliest versions of the wedge used the greater-than symbol (`>`) as a trigger. In early Commodore computers, this character could be typed without using the `SHIFT` key. Later, the at-sign (`@`) was favored for the job, since it remained an unshifted keyboard character. Another reason that wedge-writers don't care for the `>` character much is that it is sometimes "tokenized" within Basic code so that it needs to be checked twice.

There are a lot of wedge programs around, freely circulating in the Commodore community. The original, recut to fit the 64, is "DOS

MANAGER 5.1", can be found in the CompuServe CBMART forum, library 1 ("DOS-51.BIN"), as well as many other places. You must load it with `LOAD "DOS 51",8,1` and activate it with `SYS 52224`. After that, it will stay quietly in high memory until you type a line that begins with the `@` or `>` character. (There are other action characters, too, but those two are the important ones).

Commodore World readers are likely to have computers fitted with JiffyDOS. This comes with a built-in wedge, with commands similar to that of the original DOS wedge.

If you have a machine language monitor loaded in your 64, chances are that it, too, will perform wedge-type activities. `SUPERMON`, for example, does wedge stuff if you type a line starting with `@`. If that's to be followed by other information, insert a comma (thus, `@,...`); the comma is an extra which is used to specify a drive other than 8, so that a line might start `@9,...`. Exactly the same syntax is used by the built-in machine language monitor of the 128.

The list goes on. A clever software fast-loader by Eddy Carroll, called `"TURBO.VDOS"`, makes the wedge part of the standard `VERIFY` command. Just type `VERIFY` and you'll get the disk status.

Sending Commands

Wedge programs can do more than get a status message from the disk drive. They can also send disk "commands". The stuff sent over secondary address 15 is not data to be written to a diskette; instead, it's a command instructing the drive to do something.

Here's a popular command: scratch (delete) a file from the diskette. In standard 64 operation, we must do this in about three steps: open the command channel, send the command with PRINT#15 (say, PRINT#15,"S0:MYFILE"), and then close the channel. The wedge program does it in one step. Type @S0:MYFILE and the operation is under way. Some wedge programs automatically return a status; with others, you can type the "@" symbol to get this information.

There are many more commands that you can send to the disk; you'll find them listed in your disk user's guide. Table 1 shows details, but here's a quick list of popular ones, with their syntax:

```
Copy files:      C0:NEW=0:OLD
Join files:      C0:JOINT=0:PART1,0:PART2
Delete files:    S0:OLDFILE or S0:OLD*
Rename file:     R0:NEWNAME=0:OLDNAME
Validate disk:   V0 (do NOT use with GEOS disks!)
Format disk:     N0:NEWDISK,X5
Initialize drive: I0
```

There are a couple of things to note here. First, getting a directory is NOT a DOS command. The wedge will do it for you, but it doesn't belong in this list; we'll deal with it later. Second, I've used the prefix "0:" to specify the disk drive wherever possible. Dual drives are rare, but it's useful to always specify this; it helps save the disk drive from becoming confused. (Really!).

There is one example of pattern matching shown above. We'll mention it again when we get to directories: here we go. Directories.

The wedge recognizes a command such as "@\$..." as a request for a directory. This does NOT go over channel 15, but the wedge knows how to handle it.

Pattern matching can be a great help in looking at a directory. The two major pattern-matching characters are "?", which matches any single character, and "*", which matches all following characters. Thus, to search for all files whose names starts with "BA", you could type:

```
@$0:BA*
```

To track files with names such as DING, DONG, and D4NG, you could use a pattern such as "D?NG".

There's another pattern that's less well known. It's used to select the type of file you're looking for. Here are some examples:

```
@$0:GR*=S - show sequential files, names starting with GR
@$0:?=P - show program files with one-letter names
@$0:*=U - show all USR type files.
```

Again, I'm using that "0:" prefix. You'll find that things often work if you leave it out, but they will work better if you keep it in there.

One of the joys of wedge-generated directories is that they do not affect the contents of memory; the directory data goes to the screen only. That's a great feature when you have a program loaded, and don't want it disturbed.

Program Notes

Most wedge programs work only as direct commands that you type on the keyboard; they can't be triggered from programs. That shouldn't be a problem, since a well-designed program can do all the necessary commands and status checks over channel 15 without the help of a wedge. The only part that's a little tricky is directories: programmers have to work to read in one of those. We'll leave the details to another time.

If you're writing a program that will perform disk access, you'd be wise to open the command channel as one of your first acts, and close it only when your program has completed all its file work. Closing the command channel causes all other files to be closed... which is usually not a good idea.

Some Extras

Wedge programs usually come with extra commands. Typically, these include: slash, to load a program; up-arrow, to load and run a program; left-arrow, to save a program. There may well be others: JiffyDOS, for example, comes with a whole battery of extras including file-locking, sending data to the printer, and viewing disk file data. Whatever wedge you happen to have, it's useful to have documentation.

Commodore 128 owners may be a little spoiled by the Basic 7.0 commands that came with their machine. There are keywords such as COPY, CONCAT, HEADER, VALIDATE, RENAME and SCRATCH in their vocabulary, together with variables such as DS and DSS. When a 128 user starts to do wedge work, there will be a phase where the new terminology will seem uncomfortable. But it works well, and the wedge is in fact much more flexible. Table 1 may help with the translation. Stay Tuned.

If you haven't got a wedge, for heaven's sake go out and find one. I'm planning to talk about relative files soon; you'll find it very handy to have a wedge at that time. That way, there will be an easy way to check the status of your experimental relative file activities.

The "Plain Basic" commands shown that begin with PRINT#15 must be preceded by "OPEN 15,8,15: "; the "PRINT#15," is followed by the same style of command shown for the wedge, in quotation marks but omitting the starting "@" character. It's a good idea to follow up with a CLOSE 15.

The "0:" prefix to file names should not be used in Basic 7.0 commands; the prefix is inserted automatically as the command is performed. It's a good idea, however, to use it in wedge and plain Basic commands.



TABLE 1: Some Popular Wedge Commands

Action	Wedge	Basic 7.0	Plain Basic
Copy	@C0:F2=0:F1	COPY "F1" TO "F2"	PRINT#15,"C0:F2=0:F1"
Concatenate	@C0:F2=0:F2,0:F1	CONCAT "F1" TO "F2"	PRINT#15,"C0:F2=0:F2,0:F1"
Delete	@S0:F1	SCRATCH "F1"	PRINT#15,"S0:F1"
Rename	@R0:F2=0:F1	RENAME "F1" TO "F2"	PRINT#15,"R0:F2=0:F1"
Validate	@V0	COLLECT D0	PRINT#15,"V0"
Format	@N0:NAME,ID	HEADER D0,"NAME",IID	PRINT#15,"N0:NAME,ID"
Directory	@\$0	DIRECTORY "\$0"	LOAD"\$",8 ... LIST
Load	/PROGRAM	DLOAD "PROGRAM"	LOAD "PROGRAM",8
Load&Run	^PROGRAM	DLOAD "PROGRAM" .. RUN	LOAD "PROGRAM",8 ... RUN

Carrier Detect

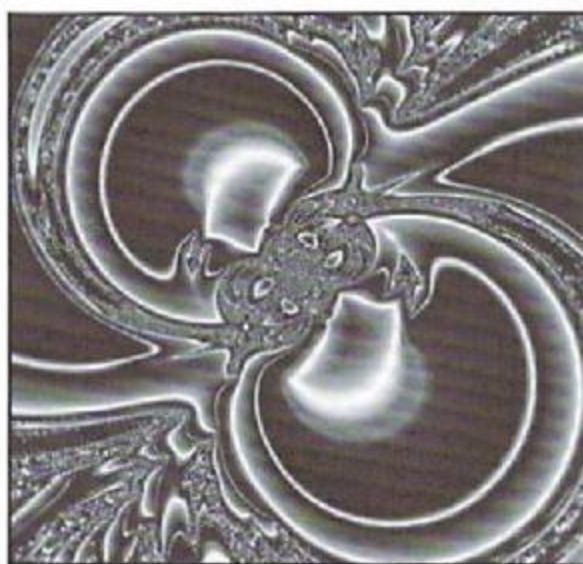
By Gaelyne Moranec



THE HUMAN SIDE OF THINGS

The world is shrinking. No, not physically, but thanks to telecommunications, more people around the world can communicate with each other easily and without a lot of hassle. When so many people are busy talking, sometimes it's easy to forget that many of the same rules of getting along with people on a day to day basis off-line also apply to the world on-line, with some important differences. Communicating with others on-line is the very human part of telecommunication, and as such, is subject to human frailties just as the software and hardware we use is subject to bugs and occasional glitches. So let's take a look at telecommunications from the human side of things.

Being human and not Vulcan, we have emotions. Sometimes we forget that the person or persons that we can't see when responding to messages also have emotions. Since you can't see or hear the other person, you also can't pick up on the usual visual or audio cues. When someone reads a message they can't tell if the person writing it was happy, sad, being sarcastic, or simply making a flat statement without any emotion at all. Add to this equation that the person reading it may not be from the same country, or possibly may not have a good grasp of the English language and might interpret the same words differently and it's a wonder it works at all. This is where "netiquette" comes in. Netiquette is a term coined to describe the common sense guidelines of getting along with others when telecommunicating. Just as in Kindergarten we were taught to keep our hands to ourselves, say "please" and "thank you", and "if you can't say anything



nice, don't say anything at all," we have an on-line equivalent. It's a little more sophisticated, but unfortunately the cookies and milk aren't included.

Rules

Before delving into general Netiquette let's take a look at some things that while you might not enjoy thinking about them, they are a fact of life. Just as there are rules to govern other aspects of our lives, there are rules that govern over telecommunicating. Getting along with others involves knowing and following the rules, regardless of where you happen to be, whether it be at home, at the office, or on-line. Most BBS's and all On-line services have rules which are in force for the same reasons. Laws are changing, varying and sometimes vague when it comes to telecommunications, and most operators (BBS or On-line service) have a healthy respect for the laws that are currently in effect. They have no

desire to lose all of their equipment, face fines, imprisonment, or both, and are quite serious about keeping their service out of legal hot water. You, as a user, need to read and follow the rules. If you don't follow the rules, you may find yourself "locked out" and unable to log onto the BBS or service, which is the operators right as a means of protecting their interests.

What kind of BBS or Service rules can you expect to see? That you give true and correct information when registering, and not attempt to have multiple registrations under various names in order to get around the rules. Some services and boards allow multiple registrations under different names, but the same rule of true and correct information applies: that you only upload demonstration, shareware/freeware, or public domain software. It is illegal for bulletin boards or on-line services to have commercial software available for download, unless under specific permission from the software copyright holder. It is also illegal to download commercial software, and it's often against the rules to even discuss it on a service. These are the major rules, but others include notice that messages, even those marked "private", should never be considered as such. The operator of the BBS or service has a right to read private messages, not that they do, but it's their right to protect themselves, as they are responsible for any activity on their service and this includes private mail. Other rules can include "no profanity allowed", and/or have an age limitation for different areas of the service.

The rules of the BBS or service are not negotiable. Don't argue about them with the Sysop.

Conference Area Rules

There are other "rules" or guidelines, which govern message areas which are from networks. Usually these rules are a combination of the network which the conference originates, and of the moderator of the conference, specific to the topic. They are also not negotiable. The rules are there for a reason, which you may or may not agree with, but if you wish to participate in the conference you need to follow the rules. The rules for a conference are usually posted (as a message) about once a month or more for each area.

Typical conference or echo rules include such things as keeping your messages on the subject of the echo. For instance, the Fidonet CBM conference is for discussion of all Commodore 8-bit computers including the PET, VIC-20, C-64, C-128, C-16, Plus/4 and other Commodore 8-bit computers and peripherals. Conversations about the Commodore Amiga, PC or Colt lines are not allowed as they are not 8-bit computers. Discussion of "Piracy" (anything having to do with illegal ownership of commercial software) is not allowed for obvious reasons. The rules of a conference can vary depending on the topic of discussion and usually stem from previous experience. The rules aren't just made up for arbitrary reasons... there's usually a history to it, such as the CBM conference rule which declares the topic of Emulators off topic. There was a time period when the topic of Commodore computers was almost completely overshadowed by the discussion of other platform computers which were trying to emulate C64's. Unfortunately, the conversations were almost 100% geared towards the operating system of the other platform computers and not the C64. Those who rely on the information of the conference for Commodore content were very frustrated. This rule solved the problem. Another echo, the PCWRITE conference, allows the discussion of Emulators.

General conference rules include such things as not insulting or "attacking" other users (also called "Flaming"), and using proper language (don't use obscenities to get your point across). Some conferences allow the use of an Alias name or a "Handle", some require you use your own names. Whether a conference allows the use of Alias or requires "real names only" may depend on which network carries the conference. Most Fidonet echoes are "real name only".

General Netiquette

Be honest and be yourself. When you first log on, be sure to give the proper information when

asked. Don't try to be someone you're not because it generally doesn't win you any favors. Be sure to read the rules of the service and if you don't understand something be sure to leave the sysop a message and ask about it... which brings up another general rule of netiquette:

Don't Insult the Sysop. Sysops are people too and are usually quite proud of the system they've put up for others to use and enjoy, and can be very defensive about their "baby". If you are having a problem ask for help, but don't be rude when you do so. Most Sysops genuinely want to help users feel comfortable and are willing to help.

Give yourself time to learn and get comfortable. If you don't like the bulletin board or service, wait and give yourself sometime to get used to it. Sometimes, especially when calling a new board, your first few experiences may be spent learning to use unfamiliar commands.

When you drop carrier (hang up) from a BBS, do so from the options the system offers you and not by using the controls within the term program. When you drop carrier (hang up) mid-session, not only is it considered rude, but it can cause the BBS to not update system data or even trash your user details (such as which messages you've read).

Contribute something. When you contribute something to the system you give something back to the sysop and add something for other users. Upload a file. Leave other users a message. Participate in the activities on-line. Don't get into the 'vacuum cleaner' habit of calling and only downloading files. This is known as "leeching".

Message Netiquette

Some of these may seem terribly obvious for those already familiar with the oddities of networked conferences, but a review now and then is good for everyone.

Unlike other methods of communication, echo mail has some quirks to it than can cause confusion for the unwary. Most networks have a definite lag time between when you post your message, when others receive it, and when you receive their replies. Keep this in mind. Don't post a message and expect to have a reply immediately, even local message areas (such as messages to the sysop) don't always have replies answered within the same day. Networked mail can take up to a week, or longer, for replies to your message to come back to you. Since many people will read your message, you can receive many replies to the same post, which brings me to another seldom mentioned netiquette rule - there's no need to reply to every message or every message addressed to you.

Private Mail Versus Public Mail

Networked conferences are usually public message areas. Don't leave messages here which are of a private or personal nature. Fidonet Netmail and Internet EMail are generally considered private. Never forget that others, such as the sysop and co-sysop's of the service can read your private mail. So can the Sysop of any BBS your message passes through. It's a good idea to never say anything in private mail that you would be embarrassed or upset if it ends up someplace where it could be read by everyone. Accidents in saving mail can happen. Just as when someone tells you something in confidence off-line, if someone tells you something in private mail it's impolite to comment on what they've told you in a public echo. It's also downright rude to move someone's private mail to you into a public echo without the senders permission.

Emoticons... The Human Touch.

As mentioned earlier, when a message is read it's hard to know the state of mind the writer was in when it was written. What was written in a humorous vein may be taken the seriously by others reading the message. Misunderstandings can be avoided by including something to let the readers know when you're being humorous, or if you're not happy. These are sometimes called "emoticons", and are the sideways smiles, frowns, and other symbols (see the sidebar) to express your emotions. BBS Shorthand is another way to express yourself if you don't care for the smiles and frowns method. For instance <g> is shorthand for <grin>, <VBG> stands for <Very Big Grin>. Using and understanding what emoticons mean when you read messages helps cut down on arguments and hard feelings that can arise when you don't use them.

Many new BBS users don't realize you should type in both upper and lower case, and instead type all in one case. I'm not sure why it is, but typing in all lower case is not the same as whispering, but typing in all CAPS is considered as SHOUTING.

Should your messages be formal or informal? This one can get you into some heated debates on-line. You will find many people who type using slang terms, not just "BBS slang", break every spelling and grammar rule in the book, and you will also find others who follow the rules of grammar to an extreme. I think most (myself included) fall somewhere between the extremes. This is an area where common sense should prevail because it depends on the conference and the topic involved. Conferences are places where discussions are similar to vocal conversation, but

are typed instead. The rules of grammar are important but messages are typed "conversations," like our speech, they don't always follow the rules of grammar. It's considered bad form to correct someone's spelling or grammar in a public message, as the person typing the message may be blind or otherwise handicapped (or not writing in their native language).

Be sure you send mail to the right person. Sometimes you can intend to send the message to the person the message is TO:, instead of sending it to the person who originally wrote the message. Take note of the person you want to receive the message, and make sure when you reply that the correct person's name is in the TO: field, and correctly spelled.

When you are replying to a message but plan to write about something different from what's in the subject line, change it to reflect the new topic. This helps those just glancing at the subjects to know what the message is about. It's frustrating to see a message with a certain subject you're interested in and find it's really about something entirely different.

When you quote a message the general rule of thumb is to quote only enough so the recipient can remember what they said in previous messages. Quoting is a tool, if not used it can lead to confusion, but when overused it can be a waste of "bandwidth".

As you write your message remember to stay on topic, not only the topic of the message itself, but not to stray from the topic of the conference itself. Try to be specific in your messages. If you know of a program that washes the dishes and waxes the kitchen floor at the same time, try to include the program name and where it can be found. If you don't know the exact filename or aren't sure of the information you're sharing check it out first so you can be accurate. Misinformation is one of the biggest downfalls of public echoes, and others appreciate accurate and informative messages.

"Don't be excessively annoying and don't be annoyed easily" ... Let's say Joe Blow told me that the program which will let my C64 control two robots that will wash the dishes and another that will mop the kitchen floor at the same time, but he gave me the wrong file name and I called long distance to download a long program which instead controls a robot that will wash my car. Of course I'm not happy about it because I've just added to my long distance bill for something I don't need. What do you think will happen if I leave Joe Blow a message telling him what a jerk he is for giving me the wrong file name? Chances are he'll feel bad that he gave me the wrong name, but he'll also be defensive and angry because I insulted him. This is a "flame". Flames are when you intentionally insult or send insulting mail to someone. Just as you wouldn't walk up to someone with a disposable lighter and intentionally harm someone, you wouldn't want to do the on-line equivalent within a message to someone. Flames make you look bad, hurt feelings, and have no place in most message conferences. Even when angry, being polite and courteous can make a better lasting impression for both yourself, and of the conference you're messages are in, as a whole. By sending a message to Joe Blow like "Joe, can you please check the name of the file I asked you about? I downloaded <filename> and it was the wrong file. This one washes the car. I'm looking for the one that washes the dishes and mops the floor." It lets him know that you got the wrong file (and if Joe is a nice guy he'll feel bad enough about it), and also gives him a chance to get the right information for you.

Wrap up

Most of the rules of netiquette are really common sense type rules that help things go smoothly, both for yourself and for others. Thanks to telecommunications, we can have conversations with people around the globe. When we can get along with others, it makes the world a better place, on-line or off.

On-Line Shorthand

BBS and online mail sometimes contains a form of message shorthand which for new users can sometimes be confusing. This is a short list of acronyms often used in messages. Words in [brackets] are to be exchanged with other words.

AFAIK	As Far As I Know
BBS	Bulletin Board System
BTW	By The Way
FAQ	Frequently Asked Questions
FWIW	For What It's Worth
FYI	For Your Information (or, For Your Interest)
<G>	Grin
IMHO	In My Humble (or Honest) Opinion
IMNSHO	In My Not So Humble Opinion
IMO	In My Opinion (I'm not humble at all)
IOW	In Other Words
LOL	Laughing Out Loud
OIC	Oh, I See
OTOH	On The Other Hand
PITA	Pain In The [A**]
POV	Point Of View
<ROFL>	Rolling On The Floor Laughing
RPG	Role Playing Game
RSN	Real Soon Now
RTFM	Read The [!@%\$] Manual
SYSOP	SYStem OPerator
TTBOMK	To The Best Of My Knowledge
TTYL	Talk To You Later

Emoticons give messages more meaning by letting you know how the other person was feeling when they typed their message. These are mostly facial expressions. If you tilt your head you can "see" the faces. Not everyone uses emoticons, but they do bring the human element into electronic messages.

:)	A lazy smiley face, "I'm Happy".
:(	A lazy frown.
:~)	Smiling, happy face; don't take me too seriously.
B~)	Same as above, but poster wears glasses or sunglasses.
8~)	Same as above, also used to denote wide-eyed look.
:-(	Sad or angry face.
>:-(	Angry/Frowning.
:~D	Wider happy face (or mouth open too much).
:~o	"Oh, noooooo!" (a la Mr. Bill).
:~)	Wink (take this message with a grain of salt).
:~&	Message indicating person is angry.
:~*	Kiss.
@%&\$%&	You know what that means!
@>--->---	A rose.

- GRM

Over The Edge

By Harold Stevens

"TAKE MY WIFE. PLEASE."

Now I know why comedian Henny Youngman always used the line, "Take my wife, please!" He must have been complaining about his wife getting on his computer whenever he wanted to use it.

For years after my wife Chris bought me my Commodore 64C I tried to get her involved with using it. At first, she was very reluctant to even touch it, let alone use it. Now I can't keep her hands off of my computer.

What happened? What turned on my normally computer illiterate and technophobic wife to my computer?

Well, it started with purchasing some games of her then favorite television games shows, like "Wheel of Fortune," "Family Feud," "Card Shark," "Classic Concentration," and "\$100,000 Pyramid." She would only play these games every now with me in tow as she usually wanted to have another live human being to play against. This was usually how we spent our Friday, Saturday and Sunday evenings if there was nothing on television to watch or anyplace to go.

On her own, she learned how to type in LOAD "*",8,1 to start her games on the C-64. She wouldn't let me help her in the process of setting up the games and the only time I was needed was when something wasn't going right or the system crashed.

Next, I found the blackjack game on the GEOS Desk Pack Plus disk and showed her how to play it. Chris really likes this game, particularly the ease of the point-and-click of the joystick on the graphic user interface (GUI) of GEOS. So, this meant that whenever I was doing something on my 64C in the GEOS environment she would ask me to put on the disk that had the blackjack game and she would take it from there. This lasted a short while as she became bored with the game and soon I had my computer back to myself all over again.

One day while in one of the local department stores I found her playing around with one of the 486 PC clones moving the mouse everywhere clicking the button every now and then. When I looked at the monitor screen I saw Chris really

getting into the Windows version of the game of Solitaire.

"Hey, now this is really nice," she said as she clicked and dragged the cards all over the screen while playing the game.

"So, you really like it, eh?" I asked, thinking now was my chance to convince her to buy me a PC to go along with my Commodore.

"Yeah, but that doesn't mean that I'm going to buy you a PC," she answered, keeping her attention on the monitor. "Why can't you find a Solitaire like this for your Commodore?" I told her that I would the next time I logged onto Q-Link.

Well, I found a couple of Solitaire games on Q-Link and downloaded all of them. All of them stunk but one, it was "Solitaire/64" by Matthew Desmond. Now here was a Solitaire game that really rivaled those versions on Windows and geoWorks Ensemble. My wife was impressed with the graphics of this game and really got into it.

So, to make it easier to load, I installed the game into my RAMLink and showed my wife how to boot it up whenever she wanted to play the game. She like the game so much, particularly with the rapid boot up from RAMLink and ease of playing it, that she became hooked on it. Sometimes she spends a couple of hours trying to win.

Hey, wait a minute, wasn't this the same woman who used to complain about me being on the computer for several hours at a time in the evening? The same woman who used to tell her friends that if a fire would hit the apartment I would grab my Commodore first and throw it out the window before grabbing her. The same woman who used to tell people that she didn't have to worry about her husband roaming the streets at night because he was at home having an affair with his computer.

Now the shoe was on the other foot. Whenever I now come home late at night from covering a city council or school board meeting for my newspaper, I find my wife at the computer playing Solitaire/64 while grumbling that she is not

winning. And you can guess who is sitting at the computer playing the same game when I come home to pick her up and take her to work. Yep, you guessed it, my wife.

Of course, I had to make the mistake of telling her about a couple of other Solitaire type games that I found on a recent Compute Gazette disk and on a local BBS that I frequent from time to time. Chris had me install them on the RAMLink, after playing them once and finding that she also like them as well. Those two games were "15 Solitaire" and "Solitaire," in case you're curious as to which one they are.

While I don't mind my wife using my computer, I do find it irritating that she is hogging it when I want to get on. I have even threatened to buy Chris her own C-64 and hook it up to the television, but she didn't want to hear that. "You can wait until I'm done playing my game," she tells me.

There is, however, a bright side to all of this. If there is something I want to watch on television that I know she doesn't like, all I have to do is move toward the computer and Chris automatically starts for it as well. "I was going to get on the computer," she cries out.

"Go ahead, be my guest," I gesture toward the computer and walk away with a smile on my face while grabbing the television remote and tuning in to watch the show I want to see. I can always count on her being on the computer for at least an hour playing one of the three Solitaire games.

I also can't complain when I have to get on the computer to do some work on it, such as when I transcribe audio tapes of interviews for my newspaper stories I write or to do this column. She always yields the computer to me when it is needed for work as this was the primary reason Chris got me the computer in the first place.

Now if I can only get her to place her recipes on a floppy disk or use the computer to write her letters instead of on the old electric typewriter. Hey, what am I saying? I'll never get to see my computer again if that happens!



* CLASSIFIED ADS *

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